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A CATALOGUE
OF THE
AMERICAN HESPERIIDAE
IN THE
BRITISH MUSEUM
(NATURAL HISTORY)



A CATALOGUE OF THE AMERICAN HESPERIIDAE

indicating the classification and nomenclature adopted

IN THE BRITISH MUSEUM
(NATURAL HISTORY)

PRESENTED

30 OCT 1951

by

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PART I

Introduction and Group A

PYRRHOPYGINAE

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INTRODUCTION

Although the collection of American Hesperiidae in the British Museum (Natural History) goes back to the very foundation of the Museum, there being still two specimens from Carolina in the Petiver collection, which dates from 1700, it cannot be said that a real beginning was made until 150 years later. That specimens were received at intervals between these dates is evident from the MS catalogues which still exist in the Department of Entomology, but few of them can now be traced.

Material collected by traveller naturalists such as H. W. Bates, Edward Doubleday and other less well-known collectors began to find its way into the Museum from about 1840, in increasing volume, and much of it, especially from South and Central America, was described by A. G. Butler. Constant accessions during the last hundred years have now resulted in the building up of a collection of considerable magnitude, through gifts, purchases and bequests, of which the more important are the following:

- 1879. Bequest by W. C. Hewitson of his entire collection, containing most of his types.
- 1912. Bequest by H. J. Adams of a large general collection.
- 1912-15. Gift by F. Ducane Godman of the Godman and Salvini collection, which formed the basis of their *Biologia Centrali Americana*.
- 1919. Bequest by E. Dukinfield Jones of an important collection from Parana and São Paulo.
- 1925. Gift by J. J. Joicey of a large general collection.
- 1931. Purchase of the R. Oberthür collection, which more than doubled the Museum's collection. It contained the Boisduval and Mabille collections with many of their types, as well as several of Latreille's types.
- 1939. Bequest by Lord W. Rothschild of his great collection. It contained the C. & R. Felder collection with many of their types.

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1947. Purchase of a collection made by A. Miles Moss in Pará, containing valuable material relating to the early stages.

There has been a great deal published regarding the butterflies of the U.S.A. The great work by S. H. Scudder (1888) on the butterflies of the Eastern U.S.A. ranks as a classic. The Hesperiidae have been dealt with in detail by A. W. Lindsey, E. L. Bell and R. C. Williams who (1931) figured the genitalia of all the species. *The Butterfly Book* by W. J. Holland (1931) contains black and white or coloured figures of all the species, many made direct from the types.

The Hesperiidae of Central America were dealt with in detail by Godman & Salvin in their *Biologia*, profusely illustrated with coloured figures and drawings of the genitalia.

For S. America a resumé of published work with coloured figures was published by A. Seitz (1921) in his *Macrolepidoptera of the World*, vol. V, under the authorship of M. Draudt. This work has been of the very greatest benefit to lepidopterists, but under the circumstances of its preparation, rapidity of publication led to unavoidable inaccuracies and omissions. Since then notable publications have been *Lepidopteros Argentinos* by K. J. Hayward (1931-2); *Butterflies of Trinidad* by W. J. Kaye (1924-5); *Butterflies of Cuba* by R. C. Williams (1931). But apart from these, there has been a great deal of fragmentary work, consisting mostly of descriptions, though often accompanied by genitalia drawings. One result is that the nomenclature of the S. American Hesperiidae has become somewhat confused. E. L. Bell, R. C. Williams, and H. Skinner have done a great deal of good work towards straightening out some of the tangles, but much remains to be done and it is one of the principal objects of this work to carry this task further with the aid of the collections and library available in the British Museum (Natural History).

A system for the classification of the Hesperiidae of the World was published by E. Y. Watson in 1897 and it has been generally followed. Watson's work was based on the Museum collection, which at that time was a small one.

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Godman and Salvin, who had at their disposal a far better collection, found it necessary to depart from Watson's arrangement in details, while adhering to his general framework. Since then our conceptions of species and sub-species have changed, and the modern view is well expressed in *Systematics and the Origin of Species* by E. Mayr (1942). This view has been followed. An exhaustive study has been made of the male genitalia and other characters with the result that many modifications have been found necessary in the arrangement of the genera and species, but Watson's general plan has not been interfered with.

The form in which the work is presented is that introduced by the author in *The Identification of Indian Butterflies* (1926 and 1932) and used in the *Catalogue of the Hesperiidae of Europe, Asia and Australia* (1949). The genera are assembled in a number of Groups designated A, B, etc.; within each Group the genera are numbered serially, as also are the species within each genus; the keys are arranged so as to preserve the numbering. The index gives the Group letter, followed by the generic and specific numbers, and can thus be used for reference to the keys for Groups, genera and species, as well as to the plates.

A few self-explanatory abbreviations have been used, such as F for forewing, H for hindwing, upf, uph, unf, unh for upperside or underside of forewing or hindwing. The only technical term used, which is not in general use, is "nudum", which denotes the bared, or sensitive, portion of the antenna, that occupies the entire outer side of the apiculus (reflexed portion of the club) and may extend along the club. The variation of the nudum is considered to be of great taxonomic importance in the Hesperiidae.

No bibliography has been included. The year of publication is given after the author's name for all species and genera. In any library that contains the necessary literature, there is sure to be a copy of the *Zoological Record*, from which the exact references can readily be obtained. There should also be available Junk's *Lepidopterorum Catalogus*, containing complete references. The parts dealing with the Hesperiidae have been ably compiled by H. H. Shepard of Minnesota, but the final part has not yet been published.

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The genitalia of all species and many sub-species have been figured. The figures are diagrams drawn freehand by the author: they are intended to indicate the differences between species and are not to be regarded as accurate representations drawn to scale. For each species the first figure depicts the ventral view of the uncus and aedeagus, the second gives the side view thereof from the left, and the last the inside view of the left clasp. When the clasps are asymmetric, the inside view of the right clasp is added. In this connection it should be noted that individual and sub-specific variation in a species is often considerable and that a careful study of the available material is needed to decide whether a variation from the diagram is sufficient to justify separation as a species or a sub-species.

The American fauna is very much more prolific in species than that of the Old World and several years of work as well as more than one volume will be needed for completing the Catalogue. It has, therefore, been decided to issue the Catalogue of the American Hesperiidae in parts, commencing with the Pyrrhopyginae (Group A). Each part will be indexed separately.

The author wishes to thank the Trustees of the British Museum (Natural History) for having permitted him to study their collections and for their acceptance of his work for publication. He also thanks the Keeper of Entomology, Mr. N. D. Riley, and Mr. A. G. Gabriel, in charge of the Rhopalocera, for the facilities he has been afforded. He is very grateful to Mr. E. L. Bell of the American Museum, New York, for assistance and the gift of specimens for study; also to Mr. W. H. T. Tams and the late Dr. A. S. Corbet of the staff of the British Museum, for advice and assistance in helping him to solve many of the taxonomic and nomenclatorial problems encountered.





Group A. PYRRHOPYGINAE

ANALYSIS OF GENERA

The *Pyrrhopyginae* differ from the rest of the *Hesperiidae* in respect of a combination of the following characters:

- (a) The stout blunt antennal club, which is obtusely angled about its commencement, so that the entire club lies in the apiculus (*i.e.* reflexed part of club) of 19 to 21 segments all of which are denuded of scales in front.
- (b) The very long forewing cell, which is longer than the dorsum and more than two-thirds as long as the costa.
- (c) The position of vein 5 of the forewing, which, at its origin, is nearer to vein 4 than to vein 6. The remaining characters are detailed in the Key to the Genera.

I believe the *Pyrrhopyginae* to be co-ancestral with the Old World *Coeliadinae* and to represent the evolution of the branch that accompanied America in its Wegener journey from Europe and W. Africa to where we now find it. In this connection attention may be drawn to the exact superficial similarity between *Pyrrhopyge ruficauda* of Brazil and *Coeliades aeschylus* of W. Africa; also to the remarkable resemblances between *Pyrrhopyge phidias bixae* of America and *Coeliades bixana* of Africa, and between *Pyrrhopyge chalybe* of Mexico and *Choaspes benjaminii* of India. Nature seems to have hit on a remarkably successful trend of evolution at the time when the great continental drift began, and what we now see is the success she achieved in the strenuous struggle for existence on the moving continent as compared with the more static conditions in the Old World. The American *Pyrrhopyginae* number 143 species as against 19 species of the *Coeliadinae* in Africa and 54 species in Asia to Australia.

The classification of the *Pyrrhopyginae* presents problems of unusual interest. The subfamily itself is compact, but it is necessary to draw attention to certain developments that have occurred in the other two cosmopolitan subfamilies of the *Hesperiidae*, namely, the *Pyrginae* and the *Hesperiinae*.

GROUP A. PYRRHOPYGINAE

The Pyrgine genus *Phocides* is made up of species which, in respect of structure and genitalia, are definitely congeneric, but in appearance *Phocides polybius*, *pigmalion* and *yokhara* are as widely divergent as the Pyrrhopygine species, *Pyrrhopyge phidias*, *Jemadia hewitsoni* and *Mimoniades yokhara*, which they respectively resemble. The resemblances are so close that one is led to think that there is something wrong with our system of classification, which postulates that *Phocides* is more nearly related to the Pyrgine genera, such as *Pyrgus* and *Erynnis* than it is to the Pyrrhopygine genera. The same remarks apply to two Hesperiine genera, where the resemblances of the Pyrrhopygine species *Pyrrhopyge phidias* and *Sarbia xanthippe* to the Hesperiine species *Pyrrhopygopsis socrates* and *Pseudosarbia phoenicola* respectively, are too striking to be passed over as either accidental or due to mimicry. However, this is not the time or place to discuss phylogeny, but it should be noted that species widely differing in appearance may be very closely allied, and, conversely, species appearing identical may be far apart structurally.

E. L. Bell (1931, *Journ. New York Ent. Soc.* 39:417) commenced a most interesting analysis of the *Pyrrhopyginae*. He discovered several new species in the genera *Pyrrhopyge* and *Jemadia*, which had been confused with other exactly similar species, but had different genitalia. He also found that certain widely differing species, in different genera, had almost identical genitalia, for example, *Pyrrhopyge intersecta*, *Jemadia theseus* and *Mimoniades iphinous*. I have ventured in this publication to assemble these species in a new genus under the name *Elbella* after the discoverer of their affinity.

With a considerably larger material the work initiated by Bell has been continued at the British Museum, and W. H. Evans (1931, *Proc. R. Ent. Soc. A.* 16:23) published some preliminary results. It was found that the specimens hitherto identified as *Pyrrhopyge hyperici*, all looking alike, and all from Pará, broke up into 7 species on genitalia differences. Then it was found that specimens from other areas, identified as *Pyrrhopyge phidias* and *Pyrrhopyge bixae* also broke up into a number of species. Finally, it was observed that the patterns of genitalia found in "hyperici"

A. PYRRHOPYGINAE

were repeated in "*phidias*" and "*bixae*". The conclusion was that there are a number of widespread species in S. America, which in particular areas look identical, but have remarkably different sub-species in other areas, in each one of which they look identical, so that the specific identity of any particular specimen can only be ascertained by a genitalia examination. The discovery of this form of variation is not claimed as new; it occurs in all forms of nature throughout the Malay islands and elsewhere. But in no case that I have observed are the similarities between quite distinct species in the same area so exact.

As a result of these and other discoveries, as will be seen from the Key to the genera and species, many changes have been necessitated in the classification and nomenclature of the *Pyrrhopyginae*.

The material contained in the Museum consists of 10,100 specimens, which have been arranged in 20 genera (5 new), 143 species (16 new), and additional 143 sub-species (64 new): 99 published names have been placed as synonyms of species and 7 as synonyms of genera. The Museum has the types of 87 species, 91 sub-species and 19 of names placed as synonyms.

A. PYRRHOPYGINAE. 20 genera in 4 sections.

Ia (20). F end cell oblique and parallel to termen.

1b (14a). Antennal club bent to apiculus before its thickest part.

1c (6a). Antennal apiculus tapering throughout its length to a fine point. Hind legs hairy on outside of tibia and inside of femur.

I. Pyrrhopyge Section. 5 genera.

1 (2a). H lower end of cell more or less at right angles to vein 4 and concave to termen: veins 3 and 4, also veins 6 and 7, wide apart at their origins. F origin of vein 4 typically mid origins of veins 3 and 6, but in two groups of species it is mid veins 3 and 5. Uncus generally broad and divided, as well as being flanked by side flanges: aedeagus typically short and straight, with a small triangular projection on the right side.

A. PYRRHOPYGINAE

Pyrrhopyge. 58 species in 11 groups.

2a (1). H lower end of cell oblique and straight: veins 3 and 4 approximate, and veins 6 and 7 much closer together at their origins.

2b (4a). F vein 4 mid veins 3 and 6 at their origins.

2 (3). H lower end cell mid base and termen. Uncus slender, undivided: aedeagus typically bent back at tip.

Elbella nov: type *Pyrrhopyge scylla* Menetries 1855: named after Mr. E. L. Bell of New York: 15 species in 3 groups.

3 (2). H lower end of cell much nearer termen than base. F cubitus between veins 3 and 4 very long and arched: veins 6 and 7 coincident for one-third of their length from cell, as in the Pyrgine genus *Phocides*. Mid tibiae spined, a unique feature in the subfamily.

Zonia nov: type *Zonia zonia* Evans (described page 48). 1 species.

4a (2b). F vein 4 mid veins 3 and 5 at their origins.

4 (5). H lower end of cell much nearer termen than base. Mid and hind tibiae without the usual spurs.

Nosphistia. 1 species.

5 (4). H lower end of cell mid base and termen. Genitalia of the *Pyrrhopyge* type.

Jemadia. 7 species.

6a (1c). Antennal apiculus not tapering until near the tip, which is bluntly pointed or rounded.

II. **Mimoniades Section.** 8 genera.

6b (12a). Hind leg femur hairy on inner side.

6c (10a). Hind leg tibia hairy on outer side.

6d (9). F vein 4 mid veins 3 and 5 at their origins.

6e (8). H vein 2 arising well before vein 7.

6 (7). F vein 2 much nearer base than vein 3, as usual.

Mimoniades. 9 species.

7 (6). F vein 2 mid base and vein 3.

Ardaris. 1 species.

8 (6e). H vein 2 and vein 7 opposite at their origins.

Amenis. 2 species.

A. PYRRHOPYGINAE

9 (6d). F vein 4 mid veins 3 and 6 at their origins. Facies of *Sarbia*: venation of *Pyrrhopyge*: genitalia of *Elbella*.

Hegesippe nov: type *Sarbia hegesippe* Mabille and Bouillet 1908. 2 species.

10a (6c). Hind leg tibiae smooth on outer side.

10 (11). H veins 3 and 4 stalked beyond end cell.

Sarbia. 6 species.

11 (10). H vein 4 from before end of cell.

Metardaris. 1 species.

12a (6b). Hind leg femur smooth on inner side.

12 (13). H termen even.

Mysoria. 5 species.

13 (12). H termen conspicuously crenulate.

Microceris. 1 species.

14a (1b). Antennal club bent to apiculus at thickest part: apiculus slender and tapering to a point. Uncus narrow and aedeagus long. Hind leg in ♀ lightly fringed inside femur and outside tibia: in ♂ may be as in ♀ or furnished on inside of femur and tibia with dense brown intermingling hair tufts, the only secondary sexual character in the subfamily.

III. **Myscelus** Section. 6 genera.

14b (18a). H apex angled: if a line were drawn from the end of vein 1b to the end of vein 8, the greatest extension of the wing would be at the end of vein 4.

14c (17). H veins 3 and 4 not stalked.

14d (16). F vein 4 mid veins 3 and 6. End uncus bifid.

14 (15). F apex not truncate. ♂ hind leg not modified. H termen crenulate, produced only at tornus.

Croniades. 2 species.

15 (14). F apex truncate and excavate to vein 5. ♂ hind leg not available. F veins 6 and 7 stalked in ♂. H termen in ♀ produced at end of vein 4.

Azonax. 1 species.

A. PYRRHOPYGINAE

16 (14d). F vein 4 mid veins 3 and 5. End uncus not divided: aedeagus bifid in 2 species. ♂ hind leg with dense brushes. H termen produced at end of vein 2 in ♂ and vein 4 in ♀.
Myscelus. 10 species.

17 (14c). H veins 3 and 4 stalked. F vein 4 mid veins 3 and 5: veins 6 and 7 more or less stalked. ♂ hind leg with dense brushes. Uncus divided at tip: aedeagus not forked. *Jemadina*-like.

Granila. 1 species.

18a (14b). H apex rounded: greatest extension of wing at end of vein 6. Uncus undivided. *Pyrrhopyge*-like.

18 (19). F vein 4 mid veins 3 and 6. H veins 3 and 4 not stalked. Hind leg in ♂ with dense tufts. Anal tuft red.

Passova nov: type *Pyrrhopyge passova* Hewitson 1866. 8 species.

19 (18). F vein 4 mid veins 3 and 6. H veins 3 and 4 stalked. ♂ hind leg not modified. Anal tuft black.

Aspitha nov: type *Pyrrhopyge aspitha* Hewitson 1866. 5 species.

20 (1a). F end cell upright, convergent with termen at torus: vein 4 mid veins 3 and 6: costal vein running unusually close to the sub-costal, so that in one species vein 11 has been eliminated, a unique feature in the *Hesperiidae*. H cell very long: veins 3 and 4 stalked or separate. ♂ hind leg more densely hairy than usual: no ♀ available for comparison. Antennae as in *Pyrrhopyge*.

IV. **Oxynetra** Section. 1 genus.

Oxynetra. 4 species.

The characters given in the key and the genitalia diagrams furnish sufficient justification for the arrangement adopted, as well as for the creation of the five new genera and the suppression of the genera *Mahotis* and *Agara*. But some further explanation is needed for the submergence to *Pyrrhopyge* of the genera *Yanguna* and *Apyrrhothrix*.

A.1. PYRRHOPYGE

Yanguna was separated by Watson from *Pyrrhopyge* on the more forward position of vein 3 of the forewing. This is a good character and, as all *Yanguna* species had hyaline spots on the forewing and *Pyrrhopyge* species had not, *Yanguna* appeared to be a perfectly satisfactory genus. But *Yanguna* is divisible into two well-marked groups (*arinas* and *cometes*), of which the first seems more allied to *Pyrrhopyge* than to the second group. Also *Pyrrhopyge rhacia* has genitalia almost identical with *Yanguna rubricollis*, while those of *Pyrrhopyge ruficauda* are of a similar type. The creation of a new genus for the *Arinas* group was considered, but the claims to generic separation of the *hygieia* and *jonas* groups could not then be overlooked.

Apyrrhothrix was introduced by Lindsey for *araxes* principally on the basis of the stouter antennal club. Bell 1931 included *maculosa*, but that species has the antennal club of *Pyrrhopyge* and, though *maculosa* and *araxes* may be generically inseparable, the principal raison d'être of *Apyrrhothrix* fails.

Since clear generic definitions seemed impossible, it was decided to abandon these two genera.

ANALYSIS OF SPECIES

A.1. PYRRHOPYGE Hübner 1819: type *phidias* Linnaeus: fixed by Scudder 1872 as *bixae* Linnaeus, which is considered to be a form of *phidias*. See Evans 1940 (*Journ. N.Y. Ent. Soc.* 48:405).

Synonyms. *Tamyris* Swainson 1820: type *phidias* Linnaeus: sole species included was *zeleucus* Fabricius, which is considered to be a synonym of *phidias*.

Pachyrhopala Wallengren 1858: type *phidias* Linnaeus: sole species included.

A.1. PYRRHOPYGE

Yanguna Watson 1893: type *spatiosa* Hewitson: specified by author.

Apyrrhothrix Lindsey 1921: type *araxes* Hewitson: specified by author.

1a (42a). End of abdomen red (or orange). Abdomen not striped.

1b (35a). Upf without spots. F vein 4 mid veins 3 and 6.

1c (20a). Tegulae black. Head and palpi red (or orange).

1d (13a). H cilia white (rarely pale yellow or brown in sub-species).

1e (10a). Patagia and fore coxae black.

1 (2a). H conspicuously crenulate. Wings abnormally broad: costa H = dorsum F. Head with mixed black and orange hairs: cheeks orange. Shining blue. ♂ F 30 mm. Genitalia nearest to the *hygieia* group: aedeagus turned back at tip.

I. Jonas Group. Single species.

jonas Felder 1859: ♀ Mexico: type B.M. Fig in Seitz: ♂ fig and genitalia G & S 1893.

Synonym. *cydonia* Druce 1874: ♂ Mexico: type B.M. B.M. 5 ♂ 4 ♀ Mexico. 2 ♂ Guatemala.

2a (1). H not conspicuously crenulate. Cheeks black.

II. Phidias Group. 8 species.

2b (7a). Uncus, seen ventrally, divided by a very narrow slit. ♀ ostium, seen ventrally, trident: dorsal arm longer than the ventral arm: side arms long and usually divergent.

2 (3a). Cuiller of clasp, on dorsal side, with a more or less conspicuous nose before the elongate basal arm. Uncus flanges very broad, of same length as uncus, heavily spined at tip in front, as well at sides and back.

phidias. 10 sub-species.

Note. The sub-species in this group are not arranged geographically as usual, but by the four types of hindwing facies, termed *hyperici*, *bixae*, *sergius* and *phidias*.

(a). *hyperici* form. Uph with a pale blue central area from end cell to mid termen. Unh white basal area extends to within 4 mm. of termen, outwardly even, filling $\frac{3}{4}$ of space 8: veins undarkened. Collar and back of head black. Cilia F brown. ♂ termen excavate on F in space 1b and on H between veins 2 and 6. ♂ F 22 mm. End of cuiller produced, finely serrate along inner edge.

Sub-sp. **hyperici** Hübner 1823: ♂ Brazil: figured. Fig Seitz: genitalia fig Bell 1931.

B.M. 27♂ 25♀ Pará (Cameta).

(b). *bixae* form. Uph plain: unh with a white basal band, which is broad, reaching end of cell, middle of space 8 and bases of spaces 2 and 6. Cilia F white to vein 4. Wings less excavate. ♂ F 25 mm. End of cuiller produced.

Sub-sp. **latifasciata** Butler 1873: ♂ Bogota: type B.M. Fig Seitz.

B.M. 5♂ 1♀ Colombia.

(c). *bixae* form. Unh typically the basal band occupies $\frac{1}{3}$ of the wing, not reaching end cell, middle of space 8, nor base of space 6 and is outwardly curved, but some specimens approach *latifasciata* or *evansi*. Cilia F more or less white to apex. Wings more or less conspicuously excavate. ♂ F 25 mm. End of cuiller produced.

Sub-sp. **bixae** Linnaeus 1758: America: fig Merian pl 44 from Surinam. Fig Seitz pl 162 d as *phidias* ♀ underside. Synonym. *maenas* Fabricius 1787: Indies.

B.M. 6♂ 6♀ Surinam. 12♂ 15♀ Fr Guiana. 53♂ 26♀ Amazons (Santarem to Iquitos). 3♂ 7♀ N.E. Brazil (Pernambuco, Maranhao). 1♂ 1♀ Matto Grosso.

(d). *bixae* form. Like *bixae*, but the wings are not excavate, the colouring is more purple and the cilia F whiter. ♂ F 26 mm. Cuiller produced.

Sub-sp. **rusca** nov: ♂ Huambo, Peru: type B.M.

B.M. 12♂ 1♀ Ecuador (Zamora). 10♂ N. Peru (Charape, Manchari). 11♂ C. Peru (Loreto, Rio Inambari, Tarapote, Ucayali, Carabaya, Pichis Rd.).

(e). *bixae* form. Unh band narrow, divided by dark veins and the outer edge straight from costa to mid space 1c. Collar red. Cilia white nearly to the apex F. Wings not excavate. ♂ F 26 mm. Cuiller is short and rounded.

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Sub-sp. **evansi** Bell 1947: ♂ Muzo, Colombia. Genitalia fig as *phidias* by G & S and Bell 1931.

B.M. 1 ♂ Mexico. 1 ♂ 1 ♀ Costa Rica. 11 ♂ 14 ♀ Panama. 108 ♂ 8 ♀ Colombia. 9 ♂ 6 ♀ Ecuador (Lita, Zamora).

(f). *sergius* form. Unh with a broad white border, nearly reaching end cell and crossed by dark veins. ♂ F 26 mm. Cuiller produced.

Sub-sp. **leucoloma** Erschoff 1876: ♂ Peru, Monterico: figured. Genitalia fig by Bell 1931.

B.M. 31 ♂ Peru (Chanchamayo, Huancabamba, Perene, La Merced, Rio Colorado, Hillapani). 2 ♂ Bolivia (Yungas, La Paz).

(g). *phidias* form. Unh no white band. Uph and unh the border more or less irregularly white, particularly in space 1c unh. ♂ Wings excavate. ♂ F 26 mm. Cuiller produced.

Sub-sp. **garata** Hewitson 1866: ♀ "Surinam": type B.M. Fig Seitz: genitalia fig Bell 1934.

B.M. 11 ♂ 13 ♀ Br Guiana. 1 ♂ Venezuela. 1 ♀ Surinam (type).

(h). *phidias* form. Unh unmarked. Head, collar, palpi and end of abdomen orange. Cilia white to apex F. ♂ F 25 mm. Cuiller not produced, short and rounded, as in *evansi*.

Sub-sp. **zenodorus** Godman & Salvin 1893: ♂ Guatemala: type B.M.: figured, as well as genitalia. Genitalia fig Bell 1931.

B.M. 5 ♂ 7 ♀ Mexico. 2 ♂ 2 ♀ Guatemala. 3 ♂ 5 ♀ Honduras. 9 ♂ 10 ♀ Costa Rica.

(i). *phidias* typical. Unh unmarked. Head etc. red: collar red or reddish. Wings more or less excavate. ♂ F 25 mm. Cuiller produced as in *bixae*.

Sub-sp. **phidias** Linnaeus 1758: Indiis. Fig in Seitz is of *bixae*: genitalia fig G & S and Bell 1931 are of *evansi*.

Synonym. **zeleucus** Fabricius 1758: Indiis: fig Jones Icones. Fig Seitz.

B.M. 5 ♂ 4 ♀ Colombia. 12 ♂ 8 ♀ Venezuela. 1 ♀ Surinam. 1 ♂ Br Guiana. 9 ♂ 5 ♀ Trinidad. 1 ♂ Minas Geraes. 1 ♀ Bahia. 1 ♂ Rio River. 1 ♀ Santa Catharina. 2 ♂ 1 ♀ no loc.

(j). *phidias* form. Usually with a strong purple shade. Wings not excavate. Back of head and collar red. ♂ 26 mm. Cuiller produced, but tip more rounded than in *phidias*.

Sub-sp. *williamsi* Bell 1931: ♂ Peru: genitalia figured.

B.M. 5 ♂ Peru. 6 ♂ 2 ♀ Bolivia. 1 ♀ Matto Grosso. 2 ♀ Parana. 1 ♀ Paraguay. (These females are very purple: genitalia of ♀ *phidias*.)

3a (2). Cuiller of clasp without the nose of *phidias*: uncus flanges more slender.

3b (5a). Uncus flanges spined on the outside and at back.

3 (4). Cuiller on inner face serrate. ♀ ostium with short side arms.

aziza. 6 sub-species.

(a). *hyperici* form. Unh white area as in *hyperici*, but cut by black veins. Uph with pale blue submarginal streaks between the veins. Wings not excavate. Collar reddish. ♂ F 23 mm.

Sub-sp. **aziza** Hewitson 1866: ♂ Colombia: type B.M. Fig Hew 1871: genitalia fig Bell 1931.

B.M. Only the type.

(b). *bixae* form. Exactly like *bixae*. Collar black. Wings more or less excavate. ♂ F 24 mm.

Sub-sp. **lexos** nov: ♂ Br Guiana: A. Hall: type B.M.

B.M. 4 ♂ Columbia (Bogota). 2 ♂ Ecuador (Zamora). 1 ♂ Br Guiana. 2 ♂ Upper Amazons (Iquitos, Upper Putumayo).

(c). *sergius* form. Unh and uph with a broad white border cut by black veins. Unh border very broad, reaching to end of cell. Collar red. ♂ F 25 mm.

Sub-sp. **araethyrea** Hewitson 1870: ♂ Ecuador. Fig Hew 1871: genitalia fig Bell 1931. Fig Seitz.

B.M. 6 ♂ 8 ♀ Ecuador (Balzapamba, Zamora, Rio Pastaza).

(d). *sergius* form. As *araethyrea*, but unh the white area of the same width as uph, not nearly reaching end of cell.

Sub-sp. **troja** nov: ♂ Peru, San Ramon: type B.M.

B.M. 1 ♂ Cauca Valley. 34 ♂ Peru (Chanchamayo, Cuzco,

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Rio Colorado, Huancabamba, Pozuzo, San Ramon, El Porvenir). 1 ♂ Bolivia (La Paz).

(e). *phidias* form. H unmarked. Collar red. Cilia white to apex F. H termen very narrowly white bordered before the cilia. Wings more or less excavate. ♂ F 23 mm.

Sub-sp. **arbor** nov: Venezuela: type B.M.

B.M. 1 ♂ Colombia. 6 ♂ 1 ♀ Venezuela.

(f). *phidias* form. Similar to *arbor* but with more or less of a purple shade. Collar conspicuously red and usually with some red hairs on the outer edge of the tegulae. H without a white border. Larger, ♂ F 24 mm.

Sub-sp. **attis** Bell 1931: ♂ Bolivia: genitalia figured.

Synonym. *denieri* Hayward 1938: ♂ Bolivia: genitalia figured.

B.M. 19 ♂ Bolivia. 1 ♂ Espirito Santo.

4 (3). Cuiller on inner face smooth. ♀ ostium as in *phidias*. Large, ♂ F 28 mm. Only the *bixae* form: unh white basal band broad, reaching end of cell. Unf often a white spot at base of space 2. Collar black or slightly reddish.

pusca nov: ♂ Chanchamayo, Peru: type B.M.

B.M. 30 ♂ 1 ♀ Peru (Chanchamayo, Perene, Rio Colorado, Mapiri R., La Merced). 3 ♂ Bolivia (Beni R.).

5a (3b). Uncus flanges smooth at side, finely serrate at back.

5 (6). Cuiller slender and tip bent inwards at a right-angle. In the *hyperici* and *bixae* forms the unf is marked with a more or less conspicuous white basal streak on either side of the sub-costal vein, as well as some white suffusion about the base of the cell and space 2, but the unh sub-basal band is not continued across unf as in *Elbella intersecta* H.S. Collar and hind part of head black.

proculus. 5 sub-species.

(a). *hyperici* form. Unh white basal area $\frac{2}{3}$ wing, outwardly evenly rounded, veins black; cilia F whitish up to vein 3. ♂ F 21 mm.

Sub-sp. **lina** Bell 1947: ♂ Pará.

B.M. 4 ♂ Pará.

(b). *bixae* form. Wings excavate. Unh white basal band broad, outwardly curved, usually reaching end cell or

beyond. Cilia F and H black, or whitish only mid termen H. Uph traces of the *hyperici* type of blue area. ♂ F 21 mm.

Sub-sp. *cardus* Mabille 1891: ♂ "Brazil".

Synonym. *hyleus* Mabille 1891: ♂ Itaituba.

Names assigned, pending examination of genitalia of types.

B.M. 1 ♂ Rio Tapajos. 1 ♂ Lower Amazons.

(c). *bixae* form. As *cardus* but cilia white except on F from apex to vein 4. ♂ F 21-23 mm.

Sub-sp. *cintra* nov: ♂ Villa Nova, Amazons: type B.M. Fig in Seitz as *fluminis* underside.

B.M. 2 ♂ 2 ♀ Br Guiana. 3 ♂ Surinam. 1 ♂ Fr Guiana.

27 ♂ 16 ♀ Amazons (Obidos, Villa Nova, Manaos, Fonte Boa, Pebas, Iquitos, Florida, Upper Putumayo).

(d). *bixae* form. Larger, ♂ F 24 mm. Wings less excavate. Unh white basal band narrow and straight, not nearly reaching end cell. Cilia as in *cintra*.

Sub-sp. *draudti* Bell 1931: ♂ Bolivia, Santa Cruz: genitalia figured.

B.M. 2 ♂ Colombia. 1 ♂ R. Negro. 7 ♂ 1 ♀ Venezuela.

1 ♂ Ecuador. 3 ♂ Peru (Tarapote, Rio Colorado). 9 ♂ 1 ♀ Bolivia (Santa Cruz, Corvico, Buenavista).

(e). *phidias* form. Unh unmarked, except that in some specimens there is an irregular bluish area. H termen narrowly white before the cilia. Wings excavate. ♂ F 23 mm.

Sub-sp. *proculus* Hopffer 1874: ♂ Guiana. Hopffer's description and the fig in Seitz apply equally well to *thericles guianae* and the name is assigned here arbitrarily pending a genitalia examination of the type. Fig Seitz as *infantilis*.

B.M. 4 ♂ Colombia. 1 ♂ Venezuela. 1 ♂ Trinidad. 4 ♂

4 ♀ Br Guiana. 1 ♀ Pará. 2 ♂ no loc.

6 (5). Cuiller broad, tip not bent inwards. Brilliant dark azure blue, different from any other *Pyrrhopyge*. ♂ F 23 mm.

infantilis. 2 sub-species.

(a). *bixae* form. Unh white basal area as in typical *bixae*. Collar black. Wings not excavate.

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Sub-sp. **infantilis** Druce 1908: ♂ Peru: type B.M.: figured.
Fig genitalia Bell 1931, but the uncus flanges are too broad and spinose, seeming applicable to *aziza lexos*. Fig in Seitz is of *proculus* as here used.

B.M. 2 ♀ Upper Amazons (St Paulo, Upper Putumayo).
7 ♂ 3 ♀ Peru (Chanchamayo, Pebas, Cavallo Cocho). 8 ♂ Bolivia (Santa Cruz, Buenavista, Yungas, La Paz, Reyes).
(b). *phidias* form. Unh unmarked. Collar red.

Sub-sp. **agala** nov: ♂ San Jacintho, Bolivia: type B.M.

B.M. 3 ♂ 2 ♀ Bolivia (type loc. Cochabamba, "Bolivia").

7a (2b). Uncus, seen ventrally, divided broadly or V-wise.
♀ ostium, seen ventrally, not showing as a trident.

7 (8, 9). Division of uncus very broad and deep, inner edges parallel and the gap between the arms wider than each arm. Cuiller of clasp very broad, end rounded and excavate on the ventral side. Uncus flanges thin, smooth, roughened: generally longer than the uncus and the tips curved inwards, nearly meeting: but in Guiana (*ponicia*, *guianae*) the flanges are very much shorter than the uncus.
♀ ostium with the ends not produced, side flanges divergent and as long as the ostium.

thericles. 7 sub-species.

(a). *hyperici* form. Large, ♂ F 25 mm. Unh white basal area occupying half of space 8, outer edge even, black border 5 mm., crossed by dark veins.

Sub-sp. **orientis** Bell 1947: ♂ Pará.

B.M. 9 ♂ 11 ♀ Pará.

(b). *bixae* form. Unh white area broad, reaching end of cell. Wings excavate. Cilia typically brown, but more usually narrowly white. ♂ F 23 mm. Collar black.

Sub-sp. **thericles** Mabille 1871: ♂ Itaituba: type B.M.

B.M. 3 ♂ 1 ♀ Obidos. 1 ♂ Maués. 1 ♂ Itaituba. 1 ♂ 1 ♀ Santarem. 1 ♂ 1 ♀ no loc.

(c). *bixae* form. Like *thericles*, but the uncus flanges are shorter than the uncus. Cilia white. ♂ F 22 mm.

Sub-sp. **ponicia** nov: ♂ Cayenne: type B.M. Genitalia fig by Bell 1931 as *pseudophidias* var.

B.M. 7 ♂ 1 ♀ Fr Guiana. ♂ 1 Surinam. 1 ♂ Manicore, Amazons. 1 ♂ "Amazons", ex coll Hewitson.

(d). *bixae* form. Unh white band narrow, not reaching end cell. Wings not excavate. Collar red. ♂ F 23 mm.

Sub-sp. **pseudophidias** Bell 1931: ♂ Muzo, Colombia: fig genitalia.

B.M. 6 ♂ 3 ♀ Panama. 65 ♂ 13 ♀ Colombia. 7 ♂ 2 ♀ Venezuela. 10 ♂ 2 ♀ Ecuador (Zamora, Loja, Paramba, Rio Pastaza, Guayaquil). 20 ♂ Peru (Charape, Moyabamba, Pichis Rd., Chanchamayo, Perene, Rio Colorado, Pozuzo, Tarapote). 1 ♂ Maranhao. 1 ♂ Matto Grosso. 15 ♂ 16 ♀ Upper Amazons (Iquitos, Ega, St Paulo, Nauta, Manaos, Pebas, Upper Putumayo).

(e). *phidias* form. Unh plain. Wings excavate. Termen H more or less narrowly white before cilia. Collar black. Uncus flanges very short as in *ponicia*. ♂ F 22 mm.

Sub-sp. **guianae** Bell 1932: ♂ Fr Guiana: fig genitalia 1934.

B.M. 10 ♂ 10 ♀ Br Guiana. 2 ♂ 2 ♀ Trinidad.

(f). *phidias* form. Wings not excavate. Termen H not white before cilia. Collar black. Uncus flanges long. ♂ F 22 mm.

Sub-sp. **folia** nov: ♂ Bogota: type B.M.

B.M. 4 ♂ 4 ♀ Colombia.

(g). *phidias* form. As *folia*, but collar red and uncus flanges more expanded at tip. ♂ F 23 mm.

Sub-sp. **rileyi** Bell 1931: ♂ Bolivia: fig genitalia.

B.M. 1 ♂ Ecuador. 1 ♂ 4 ♀ no loc (coll Felder). 2 ♂ S. Peru (Chaquimayo). 27 ♂ 5 ♀ Bolivia. 1 ♂ Bahia. 3 ♂ "Espírito Santo".

8 (7, 9). Division of uncus a broad V. Uncus flanges about the same length as the uncus, or rather shorter: smooth at side, finely serrate at back, roughened at tip. End of cuiller narrow, tapered, varied in shape: projecting arm at base of cuiller straight, curved or angled. ♀ ostium excavate, but without arms on the dorsal or ventral side: side flanges may be short or as long as the ostium to which they are appressed.

amythaon. 8 sub-species.

(a). *hyperici* form. Like *thericles orientis* but unh the outer edge of the white area is more irregular. ♂ F 24 mm.

Sub-sp. **gradens** nov: ♂ Pará: type B.M.

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B.M. 2 ♂ 2 ♀ Pará.

(b). *bixae* form. Unh basal white area very broad, reaching end of cell. Wings not excavate. ♂ F 24 mm. Back of cuiller evenly sloped.

Sub-sp. **peron** Bell 1947: ♂ Iquitos.

B.M. 3 ♂ Colombia. 3 ♂ 1 ♀ Upper Amazons (Iquitos, Putumayo R.).

(c). *bixae* form. Like *peron*. Wings excavate. Cilia tend to be more dusky. Cuiller excavate at back, tip bent forward: basal arm curved instead of straight. ♂ F 23 mm.

Sub-sp. **polka** nov: ♂ Fr Guiana: type B.M.

B.M. 1 ♂ 3 ♀ Fr Guiana.

(d). *bixae* form. Unh white area narrow, not nearly reaching end cell. Wings not excavate. Cuiller tip slender, excavate at back and bent forward: basal arm angled. Uncus flanges short, as in *polka*. ♂ F 24 mm.

Sub-sp. **perula** nov: ♂ Peru, La Merced: type B.M.

B.M. 33 ♂ 2 ♀ Peru (Tarapote, Rio Colorado, Rio Ampyan, Pichis Rd., Huancabamba, Perene, La Merced, Oroya, Limbani). 6 ♂ Bolivia.

(e). *phidias* form. Unh unmarked. ♂ F 22 mm. Wings excavate. Collar black. H termen before cilia narrowly and irregularly white: in ♂ white border unh is slightly continued inwards in each space, recalling *phidias garata*, and there are some bluish scales about end cell. Cuiller excavate at back, but not bent forward, basal arm straight.

Sub-sp. **orino** nov: ♂ Maipures, Orinoco: type B.M.

B.M. 1 ♀ Colombia. 1 ♂ type. 2 ♀ Br Guiana.

(f). *phidias* form. ♂ F 27 mm. Wings not excavate. Collar red. H termen wavy and narrowly white edged before cilia. Cuiller as *orino* but narrower: basal arm angled.

Sub-sp. **pollio** nov: ♂ Chiquimayo, Peru: type B.M.

B.M. 6 ♂ type loc.

(g). *phidias* form. ♂ 25 mm. Wings not excavate. Collar black. H termen not white before cilia. Often with a purple shade. Cuiller like *polka*.

Sub-sp. **podina** nov: ♂ Bolivia: type B.M.

B.M. 5 ♂ Peru (Oroya, Rio Inambari). 10 ♂ Bolivia (Santa Cruz, Cochabamba).

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(h). *phidias* form. ♂ F 25 mm. Wings somewhat excavate. Collar red. H termen not white edged, nor wavy. Cuiller as in *orino*.

Sub-sp. **amythaon** Bell 1931: ♂ Pernambuco: fig genitalia. B.M. 1 ♂ 1 ♀ Brazil (no precise locality).

9 (7, 8). Division of uncus a rather slender V. Uncus flanges slender and long, always longer than the uncus. ♀ ostium without side flanges, but dorsal edge much produced.

sergius. 7 sub-species.

(a). *hyperici* form. ♂ F 23 mm. Unh the white area black veined and outwardly very irregular, centrally produced nearly to termen. ♀ variable: uph the blue area may be reduced or vestigial and unh the white area may be no wider than in the *bixae* form. Genitalia as *sergius*.

Sub-sp. **selina** nov: ♂ Pará: type B.M.

B.M. 11 ♂ 8 ♀ Pará.

(b). *bixae* form. ♂ F 23 mm. Unh white area broad, reaching to end of cell. Wings not excavate. Collar black. Uncus flanges slender, very long and centrally not thickened.

Sub-sp. **andros** nov: ♂ Bogota: type B.M.

B.M. 5 ♂ 1 ♀ Colombia.

(c). *bixae* form. As *andros*, but unh white area narrow, not reaching end of cell.

Sub-sp. **andronicus** Bell 1931: ♂ Ecuador: fig. genitalia.

The Seitz fig of *phidias* fits very well.

B.M. 12 ♂ Ecuador (Rio Napo, Zamora). 2 ♂ Upper Putumayo. 7 ♂ 1 ♀ Peru (Cajamarca, Moyabamba, Cavallo Cocho, Amazonas, San Antonio, Rio Maranon, Yumbato). 1 ♂ Bolivia (Yungas--La Paz). 1 ♂ Matto Grosso (Porto Velho).

(d). *bixae* form. ♂ F 22 mm. Wings excavate. Unh band intermediate between *andros* and *andronicus*. Uncus flanges much thickened centrally. Collar black.

Sub-sp. **semana** nov: ♂ Maroni, Fr Guiana: type B.M.

B.M. 1 ♀ Surinam. 3 ♂ 2 ♀ Fr Guiana.

(e). *sergius* form. Unh with a white submarginal band cut by black veins. Collar black. ♂ F 24 mm.

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Sub-sp. **sergius** Hopffer 1874: ♂ Peru. Fig Seitz: genitalia fig Bell 1931.

B.M. 76 ♂ 2 ♀ Peru (Chanchamayo, La Merced, Rio Colorado, Perene, Huancabamba, Pichis Rd., Hillapani, Pozuzo, Marcapata).

(f). *phidias* form. Unh unmarked. Collar more or less red. Uph termen irregularly and narrowly white before the cilia: unh the white area tends to extend inwards in the spaces. Typically the uncus flanges are centrally swollen and short, but in some specimens they are long and thin: these latter may be dimorphs of *bixae* forms.
♂ F 23 mm.

Sub-sp. **ganus** Bell 1947: ♂ Br Guiana.

B.M. 2 ♀ Colombia. 2 ♂ 5 ♀ Venezuela. 2 ♂ Br Guiana. 1 ♂ Ecuador. 1 ♂ Peru (Pozuzo, Huanuco). 1 ♂ Matto Grosso (Chapada).

(g). *phidias* form. As *ganus*, but termen H not white before cilia: uncus flanges long, thin and not swollen. Collar usually red and sometimes with a red spot on the tegulae. Cilia in most B.M. specimens white (*bolius*): in one specimen there is a yellow tinge (*josephina*) and in another the cilia are yellow with an orange spot at the end of each vein (*mina*).

Sub-sp. **josephina** Draudt 1921: ♂ Bolivia, Rio Songo: figured.

Synonyms. *mina* Bell 1931: ♂ Bolivia: fig genitalia.

bolius Bell 1947: ♂ Bolivia, Chimato.

B.M. 5 ♂ S. Peru (Chaquimayo, San Gaban). 8 ♂ Bolivia (Chimato, Santiago del Estero, Mapiri, Sara, Santa Cruz, Yungas—La Paz).

10a (1e). Fore coxae red.

III. **Charybdis Group.** 3 species.

10 (11a). Patagia conspicuously red: cheeks more or less so. *Phidias* form: unh unmarked: resembles *Elbella lamprus*. ♂ cuiller rounded. ♀ ostium, dorsal side bifid and prolonged: side flanges not longer than ventral side.

charybdis. 2 sub-species.

(a). ♂ F 26 mm. Shining dark indigo blue, black veins faint.

Sub-sp. **semita** nov: ♂ Theresopolis: type B.M.

B.M. 1 ♂ "Colombia". 1 ♂ "Venezuela". 2 ♂ 2 ♀ E. Bolivia. 47 ♂ 28 ♀ S. Brazil (São Paulo, Corcovado, Santa Catharina, Organ Mts., Petropolis).

(b). ♂ F 23 mm. Paler, bronzy green, black veins conspicuous.

Sub-sp. **charybdis** Westwood 1852: ♂ Minas Geraes: type B.M.: figured. The Seitz figure has black patagia and is applicable to any of the *phidias* group. Genitalia fig Bell 1931.

B.M. 1 ♂ Pernambuco. 2 ♂ 2 ♀ Minas Geraes. 2 ♂ 2 ♀ Rio Grande. 1 ♂ 1 ♀ Unia da Victoria. 6 ♂ 2 ♀ Santa Catharina. 9 ♂ 14 ♀ Parana.

IIa (10). Patagia black.

II (12). *bixae* form. Unh with a white basal band. Clasp like *proculus* but "projection arising from the dorsal edge of the terminal arm at the base is quite different and the uncus flanges are much broader". Expanse 54 mm.

cressoni Bell 1932: ♂ Buenavista, Bolivia and 1 ♂ Ecuador: genitalia figured.

Not represented in B.M. (N.H.).

12 (11). *phidias* form: unh plain. Entire head, collar and cheeks red. Like *charybdis* except for the black patagia. ♀ ostium with rounded end, side arms as long as the ostium. ♀ F 27 mm.

polemon. Hopffer 1874: ♀ Brazil: MS fig of type in B.M. Fig Seitz.

Synonym. ? *molinai* Hayward 1940: ♂ Matto Grosso: fig of clasper (? valva broken off). Expanse and colour of patagia not stated, but description seems to apply to *polemon*.

B.M. 1 ♀ Santa Catharina. 1 ♀ São Paulo. 1 ♀ Theresopolis. 1 ♀ Brazil (coll Felder). 1 ♀ Paraguay.

13a (1d). H cilia yellow or orange. Head red, also collar and palpi: tegulae black.

IV. Amyclas Group. 7 species.

13 (14a). Fore coxae, cheeks and patagia red. ♂ F 22 mm.
Antennal apiculus less tapered, near the *Mimoniades* Group.

pelota Plötz 1879: ? loc. Fig Seitz: genitalia fig Bell 1931.
B.M. 2 ♂ "Fr Guiana" (coll Mabille). 3 ♂ Bolivia. 4 ♂
Matto Grosso. 24 ♂ 5 ♀ S. Brazil (Parana, São Paulo). 31 ♂
18 ♀ Paraguay.

14a (13). Fore coxae black.

14 (15a). Wings dark green above and below: thorax blue
above. Cilia yellow, very narrow on F, widening on H to
1.5 mm. F 27 mm.

viriditas Skinner 1920: Honduras, San Pedro.

Identity uncertain. Not in B.M. (N.H.).

15a (14). Wings dark brown.

15b (19). Unh without a red basal spot.

15c (17a). Uncus flanges very long and slender as in
sergius.

15 (16). Cheeks red. Unf termen narrowly edged yellow.
♂ F 22 mm. Uncus broadly divided, arms separated by
their own width.

amyclas. 2 sub-species.

(a). Uph submarginal yellow band broad and expanding
apically.

Sub-sp. **amyclas** Cramer 1779: Surinam: figured. Fig
Seitz: genitalia fig Bell 1931.

Synonyms. *amiatus* Fabricius 1793: Surinam.

laonome Swainson 1820: S. America.

B.M. 3 ♂ "Bogota" (coll Felder). 1 ♀ Venezuela. 2 ♂ 2 ♀
Trinidad. 7 ♂ 1 ♀ Br Guiana. 3 ♂ 4 ♀ Fr Guiana. 19 ♂
5 ♀ Surinam. 1 ♂ "Brazil".

(b). Uph submarginal band narrow, not expanding
apically.

Sub-sp. **denticulata** Herrich-Schäffer 1869: no loc: MS
fig of type in B.M.

B.M. 1 ♂ Ecuador (Rio Napo). 1 ♂ Peru (Lower Ucayali).
13 ♂ 13 ♀ Upper Amazons (Pebas, Itaituba, Villa Nova,

Iquitos, Santarem, Ega, St Paulo). 1 ♂ Matto Grosso (Porto Velho).

16 (15). Cheeks black. ♂ F 26 mm. H orange submarginal band more or less expanding from tornus upwards and usually twice as wide as cilia. Uncus divided V-wise: arms much wider than space between.

phyllaea. 2 sub-species.

(a). Patagia entirely black.

Sub-sp. **delos** nov: ♂ S.E. Peru (Rio Inambari to Limbani): type B.M.

B.M. 5 ♂ type loc.

(b). Patagia with a more or less well-developed spot on either side.

Sub-sp. **phyllaea** Hewitson 1874: ♂ Bolivia: type B.M. Fig Hew 1871 (fig 38, not 39, on plate): Seitz: genitalia fig Bell 1931.

Synonyms. *hades* Mabille 1904: ♂ Bolivia: type B.M. The fig in Seitz and genitalia fig by Bell 1931 are of *arax*. *fleximargo* Mabille & Boullet 1908: ♂ Bolivia. Genitalia fig Bell 1931 are of *Passova greta*.

B.M. 1 ♂ S. Peru. 13 ♂ Bolivia.

17a (15c). Uncus flanges shorter than the uncus, which is widely divided. Cheeks black. ♂ F 26 mm.

17 (18). Uph orange submarginal band not wider than the cilia and of even width: unh irregular, but not widening towards apex. Patagia with a more or less well-developed spot on either side. Uncus deeply divided: flanges smooth: clasp tapering.

arax nov: ♂ Bolivia: type B.M. Fig as *hades* in Seitz and genitalia fig Bell 1931.

B.M. 19 ♂ S.E. Peru (Rio Inambari, Yahuarmayo, Limbani, Carabaya, La Oroya). 30 ♂ Bolivia.

18 (17). Uph orange submarginal band of even width, broader than the cilia and inwardly serrate. Patagia black. Genitalia like *martena*: uncus division shallow: flanges spined: clasp angled at end of cuiller.

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haemon Godman & Salvin 1893: 2 Costa Rica.
B.M. 2 ♂ 1 ♀ Costa Rica.

19 (15b). Unh with a small red spot at base cell. Patagia black.

punctata Röber 1925: Bolivia, Rio Songo.

Identity uncertain. Not represented in B.M. (N.H.).

20a (1c). Tegulae conspicuously red and continued to patagia as a red spot. ♂ F 26 mm.

20b (25a). H cilia white.

V. Papius Group. 5 species.

20c (24). Head black.

20 (21a). Uncus division a narrow slit as in *phidias*: flanges slender. Fore coxae red: palpi black. Unh plain.

papius. 2 sub-species.

(a). Upper tegulae only red. Above, deep indigo blue.

Sub-sp. **pasca** nov: ♂ Colombia, Cauca: type B.M.

B.M. 22 ♂ 1 ♀ Colombia (Cauca, Manizales, Rio Siata, Pueblo Rico).

(b). Lower (hind) tegulae also red. Above, grading from deep indigo blue in Colombia to purple brown in Ecuador and Peru.

Sub-sp. **papius** Hopffer 1874: ♂ Colombia: MS fig of type in B.M. Fig in Seitz as *scylla*. Genitalia fig Bell 1931.

B.M. 66 ♂ 5 ♀ Colombia (Bogota, Papoyan, Honda, Frontino). 1 ♂ Venezuela. 44 ♂ 4 ♀ Ecuador (Loja, Angamarca, Zamora, Rio Pastaza, Rio Numbala, Ambato). 59 ♂ Peru (Chanchamayo, Moyabamba, Pozuzo, Rio Colorado, Tabaconas R., Huancabamba).

21a (20). Uncus division broad.

21b (23). Unh plain.

21 (22). Clasp broad-ended, as in *papius*: uncus flanges much broader. Exactly as *papius*, but cilia F more or less sullied and cheeks red or reddish instead of black.

frona nov: ♂ Inca, Perene, Peru: type B.M.

B.M. 4 ♂ Peru (Perene, Pozuzo, Rio Colorado).

• 22 (21). Cuiller of clasp long and narrow: uncus flanges slender and shorter than uncus.

melanomerus. 2 sub-species.

(a). Upper and lower tegulae red. Fore coxae red. Palpi black. Cuiller of clasp variable, broader than in *melanomerus*.

Sub-sp. **patma** nov: ♂ Ecuador, Zamora: type B.M.

B.M. 11 ♂ S. Ecuador (Loja, Zamora). 6 ♂ N.E. Peru (Moyabamba, Pozuzo, Huambo).

(b). Lower tegulae black. Fore coxae black. Palpi more or less red.

Sub-sp. **melanomerus** Mabille & Bouillet 1908: ♂ Bolivia.

Synonym. *tarapotoensis* Bell 1931: Tarapote: genitalia figured.

B.M. 1 ♂ "Panama". 1 ♂ "Ecuador". 16 ♂ Peru (Chanchamayo, La Merced, Perene, Carabaya).

23 (21b). Unh with a conspicuous small red spot at base of space 7. Palpi black. Upper and lower tegulae, as well as fore coxae red.

decipiens Mabille 1903: ♂ Bolivia: type B.M. Fig genitalia Bell 1931.

B.M. 1 ♂ "Ecuador". 17 ♂ Peru (Chanchamayo, Pozuzo, Carabaya, Huancabamba, Rio Huallaya, Chiquimayo, Yahuarmayo).

24 (20c). Head and collar red, as well as all tegulae, palpi and fore coxae. Unh plain. ♀ ostium as in *papius*.

placeta nov: ♀ Espirito Santo, Brazil (ex Fruhstorfer): type B.M.

B.M. 2 ♀ type loc.

25a (20b). Cilia H and F orange. Head and palpi black.

VI. Hadassa Group. 10 species (no female in B.M.).

25b (32a). Unh black. ♂ F 26–28 mm.

25 (26a). Unh without red basal markings. Only upper tegulae red. Uncus narrowly cleft: flanges < uncus: cuiller slender.

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hadassa. 5 sub-species.

(a). Fore coxae red. H submarginal band orange, as wide as cilia: unh broader, inwardly serrate. Cuiller tapering. Sub-sp. **hadassa** Hewitson 1866: ♂ Ecuador: type B.M. Fig Hew 1867. Fig in Seitz and genitalia fig Bell 1931 are of *halma*.

Synonym. *rubricor* Mabille & Boullet 1908: ♂ Loja: type B.M. Type loc given as "Bolivia", but all the material specified came from Ecuador. Genitalia fig Bell 1931.

B.M. 8 ♂ Colombia (Bogota, Papoyan, Villa Vicencio). 113 ♂ Ecuador (Zamora, Ambato, Loja, Rio Pastaza, Banos, Canalos, Angamarca, Rio Topo). 19 ♂ N. Peru (Charape, Manchara, Chinchipe). 1 ♂ Peru (La Merced). 1 ♂ Amazons (Nauta). 1 ♂ "Brazil".

(b). Fore coxae red. H submarginal band yellower, no wider than cilia and unh quite even. Cuiller as *hadassa*.

Sub-sp. **henna** nov: ♂ Huambo, Peru: type B.M.

B.M. 10 ♂ Peru (Huambo, Moyobamba, Amazonas, Chachapoyas).

(c). Fore coxae black. Uph submarginal band orange, wider than cilia, inwardly serrate towards apex: unh equally broad, inwardly even. Upf cilia orange to apex. Cuiller wider, not tapered: uncus flanges longer.

Sub-sp. **hanga** nov: ♂ Huanaco, Pozuzo, Peru: type B.M.

B.M. 6 ♂ type loc. 1 ♂ El Porvenir, Peru. 1 ♂ "Ecuador" (coll Hewitson).

(d). Fore coxae black. H submarginal band no wider than cilia: unh similar, inwardly more or less dentate. Cuiller tapered to a slender point. A very variable form.

Sub-sp. **pseudohadassa** Mabille & Boullett 1908: ♂ Peru: type B.M.

B.M. 76 ♂ Peru (Huanco, Rio Colorado, La Merced, Cuzco, Perene, Huancabamba, Chanchamayo, Pichis Rd., Hillapani, Carabaya). 1 ♂ "Colombia". 1 ♂ "Ecuador".

(e). Paler, with black veins conspicuous on upperside. H submarginal orange band much wider than cilia in spaces 4-5, thence reducing apically and tornally. Fore coxae black. Cilia F orange to apex. Cuiller tapered, straighter.

Sub-sp. **halma** nov: ♂ Bolivia, Yungas to La Paz: type B.M.

Fig as *hadassa* in Seitz and genitalia by Bell 1931.

B.M. 38 ♂ S. Peru (San Gaban, La Oroya, Rio Inambari, Carabaya, Yahuarmayo). 38 ♂ Bolivia (Cochabamba, Chaca, Yungas, Charaplaya, San Jacinto).

26a (25). Unh with basal red markings. Upper and lower tegulae red.

26b (29a). H submarginal orange band not wider than cilia.

26 (27a). Unh a single red spot at base of space 7. H submarginal band very narrow, but there may be some obscure adjoining yellow scaling in spaces 1b to 4. Above, purple brown, dark veins inconspicuous. Fore coxae red and red tegulae very conspicuous. Uncus broadly and deeply divided: flanges short, angled and spined: cuiller broad, with a projecting nose.

terra nov: ♂ Bolivia: type B.M.

B.M. 4 ♂ Bolivia (Cochabamba, Coroico).

27a (26). Unh with a red area extending across spaces 8 and 7, and often across cell: may be divided into 2 or 3 spots. Uncus broadly divided.

27 (28). Uncus deeply divided: flanges, seen from side, slender, smooth, not angled, extending well beyond the uncus division. Fore coxae red.

telassina. 3 sub-species.

(a). Unh submarginal orange band increasing towards apex. Dark veins inconspicuous. Uncus flanges, seen from back, broader, more twisted and spined.

Sub-sp. **tagra** nov: ♂ Huambo, Peru: type B.M.

B.M. 3 ♂ type loc.

(b). Unh submarginal band very variable. Dark veins inconspicuous. Uncus flanges at back slender, straighter, smooth.

Sub-sp. **telassina** Staudinger 1888: ♂ Chanchamayo: figured (as *telassa*).

Synonym. *olivacea* Röber 1925: ♂ Peru. Identity of both names uncertain until the genitalia of the types have been examined.

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B.M. 33 ♂ Peru (Chanchamayo, El Porvenir, Perene, La Merced, Pozuzo, Loreto).

(c). Unh submarginal band narrow or absent. Dark veins conspicuous. Uncus flanges as in *telassina*, but rather longer and the clasp broader.

Sub-sp. **shiva** nov: ♂ Bolivia, S. Ernesto, 2,000 ft: type B.M. B.M. 2 ♂ S.E. Peru (La Oroya, Chaqueimayo). 3 ♂ Bolivia.

28 (27). Uncus division shallow: flanges, seen from side, spined, angled, short, not reaching uncus division.

telassa. 4 sub-species.

(a). Fore coxae black: red tegulae stripes not continued to patagia. Above, purple brown, dark veins inconspicuous. Uph submarginal orange band narrow = cilia. Unh with a tendency for the red basal area to be divided into 2 spots and for the submarginal band to spread inwards. Ambato specimens are generally darker.

Sub-sp. **telassa** Hewitson 1866: ♂ Ecuador: type B.M. The fig by Hewitson 1871 is of *schausi*, and Staudinger's 1888 fig is of *telassina*.

B.M. 100 ♂ Ecuador (Ambato, Zamora, Loja).

(b). Fore coxae red: red tegulae stripes continued to patagia. Typically the orange submarginal band as in *telassa*, but variable. Rarely specimens lack the red tegulae.

Sub-sp. **phaeax** Hopffer 1874: ♂ Chanchamayo. Fig Seitz: genitalia fig Bell 1931.

Synonym. *tenuis* Staudinger 1888: ♂ Chanchamayo.

Identity of both names dependent on genitalia examination.

B.M. 71 ♂ Peru (Chanchamayo, Charape, Pozuzo, La Merced, Perene, Huancabamba, Huambo).

(c). Flying for the most part with *phaeax*, with identical genitalia, is a distinct form with the orange border H twice as wide as cilia and inwardly irregular. It can only be separated from *telassina* by a genitalia examination.

Sub-sp. **silex** nov: ♂ Inca, Perene, Peru: type B.M.

B.M. 20 ♂ Peru (Huancabamba, Perene, Pozuzo, La Merced).

(d). Fore coxae black. Greenish black with conspicuous black veins. H submarginal band absent. Cilia orange to pale yellow.

Sub-sp. **croceimargo** Mabille & Boullet 1908: ♂ Bolivia. Fig in Seitz is more like *telassa* or *phaeax*. Genitalia fig Bell 1931.

Synonyms. *cleopas* and *mendax* Mabille & Boullet 1908: ♂ Bolivia and Peru appear to be minor varieties.

B.M. 43 ♂ S. Peru (Chaquimayo, San Gaban, Rio Inambari). 41 ♂ Bolivia.

29a (26b). H submarginal orange band very much wider than the cilia, at least 2·5 mm. Unh basal red area tending to run along the costa towards the apex. Uncus division broad.

29 (30a). Fore coxae black. H submarginal band increasing in width from tornus, widest at end of vein 6: uph inwardly regular and unh more or less pierced by dark veins. Uncus division deep: flanges straight, short and smooth.

martena Hewitson 1871: ♂ Ecuador: figured. Fig Seitz: genitalia fig Bell 1931.

B.M. 48 Ecuador (Ambato, Zamora, Loja, Sarayacu, Rio Pastaza).

30a (29). Fore coxae red (rarely black in *schausi*).

30 (31). H submarginal orange band of same width throughout, inwardly dentate. Unh a tendency for the basal red area to be divided into 2 spots. Uncus division shallow: flanges broad-ended, not reaching as far as the uncus division.

schausi Bell 1931: ♂ Ecuador: genitalia figured. Fig Hew 1871 as *telassa* ♂.

B.M. 1 ♂ Colombia (Cauca). 64 ♂ Ecuador (Ambato, Loja, Zamora, Banos, Rio Pastaza). 6 ♂ N. Peru (Rentema Falls).

31 (30). H submarginal band very broad up to vein 2, thence running as a line to the tornus: unh evenly tapering to the tornus: band inwardly pierced by dark veins. Unh

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the red basal area always continued above vein 8 to the apex. Uncus very deeply divided: flanges slender, smooth and long, much longer than in *martena*.

sadia nov: ♂ Ecuador, Sarayacu: type B.M.

B.M. 11 ♂ Ecuador (Loja, Zamora, Sarayacu). 4 ♂ Peru (Rentema Falls).

32a (25b). Unh not black. H cilia yellow, no submarginal ochreous band. ♂ F 26 mm.

32 (33a). Unh entirely ochreous reddish, veins very narrowly dark and dorsum more or less darkened. Upf black, sometimes with pale ochreous suffusion in and beyond the cell. Uncus division broad and shallow: flanges expanded and spined at tips.

creona Druce 1874: ♂ Peru: type B.M. Fig Seitz.

Synonym. *aurora* Mabille 1891: Brazil.

B.M. 23 ♂ Peru (Chachapoyas, Amazonas, Huayabamba, Huambo). 1 ♂ Amazons (Manicore).

33a (32). Unh with very conspicuous veins.

33 (34). Upf with orange red streaks in spaces 1b, 2 and cell, vestigial in space 3: uph black. Unh with a broad black border (5 mm.) along termen and dorsum, rest of wing orange red. Uncus division a very narrow short slit: flanges slender, spined. Genitalia very like *papius*.

kelita Hewitson 1869: ♂ Bolivia: type B.M. Fig Hew 1871 and Seitz, ♂ only: genitalia fig Bell 1931.

Synonym. *tristis* Mabille & Bouillet 1908: ♂ Bolivia.

B.M. 24 ♂ S.E. Peru (Cuzco, Rio Inambari, Carabaya, La Oroya). 39 ♂ Bolivia.

34 (33). Upf sordid white, except for a black border, 3 mm. on costa and dorsum, 5 mm. at termen: veins broadly black. Unf border at termen narrower. Unh yellowish white with broad dark veins, some dark scaling at base and apex. Uncus division narrow and shallow: flanges stout, heavily spined.

crista nov: ♂ Bolivia, Apolobamba: type B.M. Fig Hew 1871 as ♀ of *kelita*.

B.M. 3 ♂ type loc.

35a (1b). Upf with spots. Head and palpi red. F vein 4 mid veins 3 and 5.

VII. Arinas Group. 7 species.

35b (40a). Upf a band of 3 large hyaline white spots across cell, spaces 2 and 1b. Cilia H white.

35 (36a). Upf band directed to tornus. Collar red. Fore coxae and cheeks black. ♂ F 26 mm.

crida Hewitson 1871: ♂ Nicaragua: type B.M. Fig Hew 1871: Seitz: genitalia fig G & S 1893.
B.M. 2 ♂ Nicaragua. 2 ♂ 3 ♀ Colombia. 1 ♂ Ecuador (Paramba).

36a (35). Upf band directed to dorsum well before tornus. A group of 4 almost identical species with different genitalia.

36b (39). Collar red.

36 (37a). Upf with a hyaline white streak on the costa over the cell spot. Fore coxae and cheeks red. Division of uncus, a short narrow slit: flanges longer than uncus and basally much expanded: cuiller curiously twisted. ♂ F 28 mm.

mopsus Bell 1931: ♂ Chanchamayo: type B.M. Genitalia fig Bell 1933.
B.M. 4 ♂ Peru (Chanchamayo, La Merced).

37a (36). Upf no hyaline costal streak.

37 (38). Fore coxae black, cheeks entirely red. Cuiller of clasp with a long, narrow, projection inwards before the tip. Uncus flanges short, basally widened. ♂ F 25 mm.

sarpedon Bell 1931: ♂ Pebas, Amazonas: type B.M. Genitalia fig Bell 1938.
B.M. Only the type.

38 (37). Outer half of cheeks black. ♂ F 26 mm.

arinus. 2 sub-species.

(a). Wings excavate. Cilia F black. Fore coxae and inner half of cheeks red. Uncus deeply and broadly divided: flanges nearly as long as the uncus, not expanded basally.

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Sub-sp. **arinus** Cramer 1779: Surinam: figured. Fig Seitz.

Synonym. *pedaia* Hewitson 1866: ♂ Ega, Amazons: type

B.M. Fig Hew 1871: Seitz.

B.M. 2 ♂ Fr Guiana. 3 ♂ Upper Amazons (Ega, Iquitos).

(b) Wings not excavate. Cilia F all black in 2 males: lower half or rather more whitish in 5 males: all white in 1 male. Inner half of cheeks red. Fore coxae all red in 2 males: half red in one: black with some red hairs in 4 males: all black in one.

Sub-sp. **temenos** Bell 1931: ♂ Chanchamayo: type B.M.

Genitalia fig Bell 1933.

B.M. 8 ♂ Peru (Chanchamayo, La Merced, Inca, Perene).

39 (36b). Collar black. Fore coxae black: inner half of cheeks red. Uncus division a short narrow V: flanges expanded apically, reaching to division of uncus. Wings excavate. ♂ F 23 mm.

creusae Bell 1931: ♂ Fr Guiana: type B.M. Genitalia fig Bell 1933.

B.M. 1 ♂ 1 ♀ Fr Guiana.

40a (35b). Upf with red spots. Fore coxae black. ♂ F 27 mm.

40 (41). Upf only with a central band of 3 spots. H cilia white. Patagia red spotted. Collar red.

tatei Bell 1932: ♂ Mt Duida, Venezuela: genitalia figured. Not represented in B.M. (N.H.).

41 (40). Upf with additional spots in spaces 3, 4 and 6, 7, 8. H cilia yellow. Patagia black: collar reddish.

boulletti Le Cerf 1922: ♂ Colombia.

B.M. 1 ♂ Colombia (Pampelona).

42a (1a). End of abdomen brown (partly white in *cometes* and ochreous in *araxes*).

42b (49a). Head black, without conspicuous white lines or dots. Wings unmarked. Abdomen not striped.

42c (48). Cilia not white. Iridescent dark blue or green with a black or orange border. F vein 4 mid veins 3 and 6.

VIII. Hygieia Group. 6 species.

42d (45a). Cilia F and H black. ♂ F 28–30 mm.

42e (44). Uph and unh with a sub-tornal red spot.

42 (43). Wings rounded. Head and palpi black.

creon Druce 1874: ♂ Panama: type B.M. Fig with genitalia by G & S 1893: fig Seitz: genitalia fig Bell 1931.

Synonym. *cyclops* Staudinger 1875: Panama.

B.M. 15 ♂ 4 ♀ Costa Rica. 8 ♂ 6 ♀ Panama. 1 ♂ 1 ♀ Colombia.

43 (42). Wings produced. Palpi and head red or reddish.

sangaris Skinner 1921: ♂ Magdalena Valley, Colombia.

B.M. 2 ♂ 1 ♀ Colombia (Onaca, Santa Marta).

44 (42e). Unh with large sub-basal red spots in spaces 1c, 2 and cell, faintly showing uph. Abdomen reddened at sides in middle of each segment. Palpi black. Head black with some pale brown hairs in front of the base of each antenna. Shining dark green.

aerata Godman & Salvin 1879: ♀ Colombia: type B.M.: figured. Fig Seitz.

B.M. Only the type.

45a (42d). Cilia orange on H.

45 (46a). Cilia narrowly orange throughout. Femora of all legs outwardly orange. Head and palpi black.

chalybea. 2 sub-species.

(a). Smaller, ♂ F 20–22 mm. Paler and greener, borders yellow rather than orange.

Sub-sp. **chalybea** Scudder 1874: Mexico. Genitalia fig G & S 1893 and Bell 1931.

B.M. 31 ♂ 17 ♀ Mexico (Jalisco).

(b). Larger, ♂ F 26–28 mm. Darker and bluer: borders orange.

Sub-sp. **chloris** nov: ♂ Guerrero, Mexico: type B.M.: figured as *zereda* by Hewitson 1871 and in Seitz.

B.M. 26 ♂ 19 ♀ Mexico (Guerrero). 1 ♂ Guatemala. 1 ♀ Honduras.

46a (45). Cilia F dark (sometimes orange in space 1b in *aesculapius*). ♂ F 27–28 mm.

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46 (47). H orange border narrow and even, reaching vein 8. Head with inconspicuous white hairs behind palpi and in front of the antennae.

aesculapus Staudinger 1875: ♂ Panama. Fig Staudinger 1889: G & S 1893 with genitalia: fig Seitz: genitalia fig Bell 1931.

Synonym. *variegaticeps* Godman & Salvin 1879: ♂ Costa Rica: type B.M.

B.M. 19 ♂ 1 ♀ Costa Rica. 6 ♂ 9 ♀ Panama. 1 ♀ Colombia. 1 ♀ Ecuador.

47 (46). H orange bands broad and uneven, reaching vein 7, extending on to the wing and widening tornally, inwardly serrate. ♂ F 28 mm.

hygieia. 6 sub-species.

(a). Fore coxae black, palpi red, collar black. H border generally tapering from 1 to 4 mm. at tornus (narrower in type), but not, as in other sub-species, reaching vein 1a. Cuiller of clasp heavily spined: the inward projecting arm nearly reaches the end of the valva. Uncus flanges shorter than uncus division.

Sub-sp. **hygieia** Felder 1866: ♂ Bogota: type B.M.: figured. Fig Seitz.

Synonyms. *bogotana* Reakirt 1868: Colombia.

phoebus Röber 1925: Cauca Valley: redness of palpi reduced.

B.M. 12 ♂ 2 ♀ Colombia (Bogota, Cundinamarca). 1 ♂ 1 ♀ N. Ecuador (Paramba: border H narrower as in some Colombia specimens).

(b). Fore coxae reddish, palpi black, collar reddish. H border narrow and even as in *rufinucha*, which it closely resembles, but the genitalia of *zereda* are like *hygieia*. The type of *zereda* has about an equal quantity of black and red hairs on the collar and only a few red hairs on the fore coxae. The Amazon specimen has the collar like *zereda*, but the fore coxae are mostly red and the border H is slightly tapered.

Sub-sp. **zereda** Hewitson 1866: ♂ Ecuador (probably East): type B.M. Hewitson's fig 1871 is of *chalybea chloris*, also fig in Seitz.

B.M. 1 ♂ Ecuador. 1 ♂ Amazons (Nauta).

(c). Fore coxae red: palpi and collar black. H band broad, 3 mm., comparatively even. Shining dark indigo or purple blue.

Sub-sp. **rufipectus** Godman & Salvin 1879: ♂ Rio Topo, Ecuador: type B.M. Genitalia fig Bell 1931.

B.M. 1 ♂ Colombia (Popayan). 51 ♂ Central Ecuador (Ambato, Angamarca, Rio Pastaza, Banos to Canelos, Rio Topo).

(d). Like *rufipectus*, but of quite a different shade of blue, dark silvery azure. 2 ♂ from Zamora and the only ♂ from Loja have the fore coxae black as in *insana*.

Sub-sp. **zepha** nov: ♂ Zamora, Ecuador: type B.M.

B.M. 15 ♂ S. Ecuador (Zamora, Loja).

(e). Fore coxae, collar and palpi black. Colouring intermediate between *zepha* and *rufipectus*. H border rather narrow and inwardly less irregular.

Sub-sp. **insana** Staudinger 1875: ♂ Peru.

Synonym. *fassli* Boullet 1910: Huancabamba. Fig M & B 1912. Boullet wrongly states that the collar of *insana* is red.

B.M. 56 ♂ 1 ♀ Peru (Chanchamayo, Huancabamba, La Merced, Pozuzo, Rio Colorado, Illimani, El Porvenir).

(f). Fore coxae red: palpi black: collar red. H border narrow, 1.5 mm., of even width. Cuiller of clasp considerably different, roughened, not spined: the inward projecting arm much shorter, not nearly reaching end of valva: uncus flanges longer, reaching the uncus division.

Sub-sp. **rufinucha** Godman & Salvin 1879; ♂ Bolivia: type B.M. Fig Seitz.

Synonym. *apollo* Röber 1925: Bolivia. Genitalia fig Bell 1931.

B.M. 2 ♂ Peru (Cuzco). 8 ♂ Bolivia (Yungas, Rio Songo to Rio Suapi).

48 (42c). Cilia white except at tornus H, where they are orange between veins 1a and 1b. Above steely indigo blue, like *phidias*. Head, palpi and fore coxae black: an obscure white dot at base of each antenna. Genitalia peculiar, nearest to *rubricollis*. F vein 4 mid veins 3 and 6. ♂ F

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26 mm. Superficially identical with *Coeliades aeschylus* of W. Africa.

IX. Ruficauda Group. Single species.

ruficauda Hayward 1932: ♂ Argentine, Misiones.

Synonym. *excelsus* Bell 1947: ♂ Londrina, Parana: genitalia figured.

B.M. 1 ♂ 1 ♀ Parana (Castro).

49a (42b). Head with conspicuous white (yellow in *araxes*) lines and dots. Palpi never red. Abdomen more or less striped.

49b (57a). H termen even, cilia not chequered. F vein 4 mid veins 3 and 5 except in *rhacia*, where it is mid veins 3 and 6.

X. Cometes Group. 8 species.

49 (50)a. Fore coxae red. Legs black. Patagia red in ♀ reddish in ♂: rest of thorax black. Palpi and cheeks white. F with a central white hyaline band in spaces 1b, 2 and cell. Cilia F black: H white. ♂ F 27 mm.

tetricus Bell 1931: ♂ Roraima: type B.M. Genitalia of ♂ type are drawn from a slide and have been damaged: fig Bell 1933.

B.M. 1 ♂ Br Guiana. 1 ♀ Peru (Moyabamba).

50a (49). Fore coxae white (may be brown in *spatiosa*).

50b (53a). Femora and tibiae of all legs more or less red-haired and the red hairs on the thorax, below, just extend to the wing bases. Palpi and cheeks white. Clasp with a narrow central arm, from base across cuiller, as in *ruficauda*. Cilia H white.

50 (51a). Upf unmarked. Patagia broadly red and a few red hairs on tegulae. Cilia F brown and white. ♂ F 27 mm.

rhacia Hewitson 1874: ♂ Minas Geraes: type B.M. Fig Seitz from a specimen with the thorax entirely red above. Synonym. *flemingi* Bell 1947: ♂ Venezuela: genitalia figured.

B.M. 1 ♂ Minas Geraes. 1 ♂ Rio de Janeiro.

51a (50). Upf with the usual band of 3 hyaline white spots. Cilia F dark brown.

51 (52). Above, thorax (except patagia) and wing bases without red hairs. Uncus flanges short: central arm of clasp long, as in *rhacia*. ♂ F 26 mm.

rubicollis Sepp 1848: Surinam: figured. Fig Seitz.

Synonym. *hadora* Hewitson 1866: ♂ Amazons: type B.M. Fig Hew 1871: Seitz: genitalia fig Bell 1933.

B.M. 2 ♂ 1 ♀ Fr Guiana. 7 ♂ 3 ♀ Amazons (Iquitos, Ega, Pará, St Paulo). 2 ♂ Peru (Chanchamayo). 7 ♂ Bolivia.

52 (51). Above, thorax and wing bases red. Uncus flanges as long as uncus: central arm of clasp not reaching end of cuiller. ♂ F 25 mm.

timaeus Bell 1931: ♂ Pebas, E. Peru: type B.M. Genitalia fig Bell 1933.

B.M. 1 ♂ Colombia (Bogota). 2 ♂ Peru (Rio Pacaya, Ucayali, Pebas).

53a (50b). Femora and tibiae of legs more or less white-haired.

53b (55a). Uph red or orange basal colouring not extending beyond middle of wing. Upf no spots in spaces 3 and 4.

53 (54). Upf cilia white.

cometes 3 sub-species.

(a). Small, ♂ F 26–28 mm. Wings narrower and more excavate. Tendency for apical spots upf to be absent.

Sub-sp. **cometes** Cramer 1779: Surinam: figured. Cramer's fig has a red head, probably gummed on from another species.

B.M. 3 ♂ 1 ♀ Fr Guiana. 2 ♂ 2 ♀ Pará.

(b). Larger, ♂ F 30 mm. Wings not excavate. Upf 3 apical spots.

Sub-sp. **staudingeri** Plötz 1879: ? loc. Fig Seitz: genitalia Bell 1933.

B.M. 44 ♂ 3 ♀ Peru (Chanchamayo, Pozuzo, La Merced, Rio Colorado, Cajamarca, Perene, Huambo, Huayabamba). 1 ♀ Upper Putumayo. 2 ♂ "Bolivia" (? Peru). 1 ♂ "Fr Guiana" (? Peru).

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(c). Similar to *cometes*, but upf apical spots absent.

Sub-sp. **cometides** Mabille & Boullet 1908: ♂ Bolivia. Fig Seitz.

B.M. 4 ♂ Peru (Cuzco). 27 ♂ 2 ♀ Bolivia. 1 ♀ "Colombia" (? Bolivia).

54 (53). Uph cilia black: otherwise as *cometes*. ♂ F 27–28 mm. Shape of clasp considerably different from *cometes*.

thelersa Hewitson 1866: ♀ S. Paulo: type B.M. Genitalia fig Bell 1933.

Synonym. *blossomiae* Williams 1931: ♂ Ecuador: figured. B.M. 1 ♀ Ecuador (Rio Napo). 3 ♂ Peru. 1 ♂ Fr Guiana. 2 ♂ 1 ♀ Amazons (Maranhan, S. Paulo).

55a (53b). Uph basal red or orange colouring extending to well beyond the middle of the wing.

55 (56). Above, basal clothing orange. Palpi and fore coxae white. Upf spots in spaces 3 and 4, as well as the central and apical spots. ♂ F 28 mm.

cosyra Druce 1875: ♂ Panama: type B.M. Fig with genitalia by G & S 1893: Seitz: genitalia fig Bell 1933.

B.M. 1 ♀ Guatemala. 1 ♂ Honduras. 1 ♂ 1 ♀ Nicaragua. 7 ♂ 9 ♀ Panama. 3 ♂ 1 ♀ Colombia. 2 ♂ 4 ♀ Ecuador. 1 ♂ "Peru". 1 ♀ "Santa Catharina".

56 (55). Above basal clothing red.

spatiosa. 3 sub-species.

(a). Upf marked as *cosyra*. Palpi white striped. Fore coxae mostly black. ♂ F 30 mm.

Sub-sp. **spatiosa** Hewitson 1870: ♀ Ecuador: type B.M. Fig Seitz: Staudinger 1888: genitalia Bell 1933.

B.M. 2 ♂ 3 ♀ W. Colombia (S. Antonio, Santa Margarita). 14 ♂ 4 ♀ Ecuador (Zamora, Ambato, Sarayacu, Rio Pastaza).

(b). Upf spots in spaces 3, 4 and at apex absent. Unh basal area orange and fills cell. ♂ F 30 mm.

Sub-sp. **mabilie** Druce 1909: ♂ Huancabamba: type B.M. Fig Seitz as *aspitha*.

B.M. 5 ♂ 1 ♀ Peru (Huancabamba, Pichis Rd.).

(c). Upf spotless. Unh red area reduced to 2 basal spots. White scales on palpi and legs vestigial.

Sub-sp. **aspilos** Mabille & Boullet 1908: no loc: figured.
Fig Seitz.
B.M. 1 ♀ Bolivia (Farinas).

57a (49b). H crenulate, cilia chequered. Upf usually with hyaline white spots, including usually one in space 9. Abdomen striped below. F vein 4 mid 3 and 6.

XI. Maculosa Group. 2 species.

57 (58). Above black, head white spotted. Unh with an unspotted orange basal area. Antennal club as *phidias*. Palpi black, white centred, cheeks white. ♂ F 27 mm.

maculosa 4 sub-species.

(a). Upf unmarked, except for a red sub-basal spot in space 1b. Unh basal orange area narrow, not reaching mid wing.

Sub-sp. **müllerri** Bell 1934: ♂ ? loc: genitalia figured.

Synonym. *plancartei* Hoffman 1941: ♂ Mexico: figured.
Not represented in B.M.

(b). Upf fully spotted: a conspicuous red spot near base in space 1b. Unh basal $\frac{2}{3}$ orange.

Sub-sp. **erythrosticta** Godman & Salvin 1879: ♂ Nicaragua:
type B.M. Fig Seitz: genitalia fig G & S 1893.

B.M. 1 ♂ 1 ♀ Guatemala. 12 ♂ 5 ♀ Honduras. 5 ♂ 1 ♀
Nicaragua. 12 ♂ 6 ♀ Panama.

(c). As *erythrosticta*, but upf no red spot in space 1b.

Sub-sp. **maculosa** Hewitson 1866: ♂ Colombia: type B.M.
Fig Seitz. Genitalia fig Bell 1931.

Synonym. *agathon* Felder 1867: ♀ Bogota: type B.M.:
figured.

B.M. 45 ♂ 2 ♀ Colombia. 1 ♀ Ecuador (Paramba).

(d). As *maculosa*, but upf with a broad orange basal band.

Sub-sp. **cossaea** Druce 1875: ♂ Colombia: type B.M.

B.M. Only the type (? an aberration).

58 (57). Above brown, basally ochreous brown. Head yellow lined and spotted: palpi and cheeks yellow. Unh ochreous basal area with large dark spots. Upf spots in spaces 3, 4, 5 conspicuous and contiguous. Antennal club barely tapered and ending in a rounded point. ♂ F 27 mm.

A.2. ELBELLA

araxes 2 sub-species.

(a). Paler. Unh the dark spots faint on the yellow ground.
Sub-sp. **arizonae** Godman & Salvin 1893: ♂ Arizona: type B.M. Fig Holland 1931: Seitz.
B.M. 32 ♂ 25 ♀ Arizona.
(b). Darker. Unh dark spots conspicuous on the darker yellow ground.
Sub-sp. **araxes** Hewitson 1867: ♀ Mexico: type B.M. Fig with genitalia G & S 1893: Seitz: genitalia fig Bell 1931.
Synonym. *cyrillus* Plötz 1879: Mexico.
B.M. 18 ♂ 13 ♀ Mexico (Guerrero, Vera Cruz).

A.2. ELBELLA Evans 1948 (p. 4): type *scylla* Menetries: fixed by author. Named after E. L. Bell of New York.

Uncus tapered to a sharp point: seen ventrally it is curved downward: flanked by two short, broad, spinose flanges.

Ia (9a). Anus red; abdomen black, not striped. Like *Pyrrhopyge*.

I. Scylla Group

I (2a). Head black with white lines and spots. Cuiller of clasp long, tapered, serrate and conspicuously curved back: without a projecting arm on the inner side. Patagia red: fore coxae black. Cilia white. ♂ F 25 mm.

scylla. 2 sub-species.

(a). Palpi mostly red and cheeks partly red. Tegulae with a narrow coloured stripe, which is usually yellow in Mexico, red in Guatemala, grey or absent in Honduras. H not white edged along termen before cilia.

Sub-sp. **scylla** Menetries 1855: ♂ Nicaragua: figured. Fig G & S as well as genitalia, which are also fig Bell 1931. The fig in Seitz is of *Pyrrhopyge papius*: fig of *dulcinea* is *scylla*.

B.M. 11 ♂ 2 ♀ Mexico. 9 ♂ 3 ♀ Guatemala. 14 ♂ 5 ♀ Honduras. 1 ♂ Nicaragua.

(b). Palpi mostly black and cheeks mostly so. Tegulae grey striped and there is a narrow grey stripe on either side of the thorax before the tegulae. H termen narrowly white before the cilia.

Sub-sp. **dulcinea** Plötz 1879: ♂ Panama.

B.M. 1 ♂ Costa Rica. 18 ♂ 2 ♀ Panama. 1 ♂ Colombia.
1 ♂ Venezuela. 1 ♂ "Fr Guiana".

2a (1). Head red, or black with red hairs. Palpi red.

2 (3a). Patagia black, as well as the cheeks and fore coxae: palpi red, and collar more or less so. H termen somewhat crenulate. Cilia H white. Genitalia as *scylla*. Occurs in 3 forms, as in the *phidias* group of *Pyrrhopygæ*: the *hyperici* form is confined to Pará: but the *phidias* and *bixae* seem to occur dimorphically and to intergrade.

intersecta. 5 sub-species.

(a). Uph plain: white colour of cilia not spreading to wing. Unh may be plain like *phidias* (*intersecta* form) or with a basal white band like *bixae* (*fluminis* form), but the band extends full width to the costa unh and varies greatly in width. Cilia F white to apex, but usually intersected with brown at the ends of veins 3 to 6. ♂ F 26 mm.

Sub-sp. **intersecta** Herrich-Schäffer 1869: no loc (typical specimen taken to be a ♂ from Colombia with a plain unh).

Synonyms. *fluminis* Butler 1873: for Cramer's plate 199d of a ♀ from "Surinam" with a broad band unh. Fig in Seitz, pl. 102c of *intersecta* underside, is of a specimen intermediate between typical *intersecta* and *fluminis*: his fig of *intersecta* upperside would match any *phidias*-like species: his fig of *fluminis* = *Pyrrhopygæ proculus cintra*. Genitalia fig Bell 1931.

tiribazus Plötz 1879 (MS) is *fluminis* Butler.

B.M. 16 ♂ Colombia (Cauca, Bogota, Rio Dagua: 4 *intersecta*, rest *fluminis*). 7 ♂ Ecuador (Macas, Loja, Rio Napo: all *fluminis*). 19 ♂ 1 ♀ Peru (Chanchamayo, Perene, Tarapote, Rio Colorado, Pichis Rd., La Merced: 6 *intersecta*, 6 intermediate, rest *fluminis*). 5 ♂ Bolivia (1 *intersecta*, 1 intermediate, 3 *fluminis*). 11 ♂ 1 ♀ Amazons (Santarem, Obidos, Rio Maderia, Pebas, Iquitos, Upper Putumayo: all *fluminis*). 4 ♂ Matto Grosso (1 *intersecta*, 3 *fluminis*).

(b). *phidias* form. H with a narrow white border to termen before cilia, which unh may be broader and inwardly irregular, as in *phidias garata*. Wings more excavate. Cilia F as in *intersecta*. ♂ F 26 mm.

A.2. ELBELLA

Sub-sp. **strova** nov: ♂ Suapure, Venezuela: type B.M.
B.M. 1 ♂ 1 ♀ Venezuela. 1 ♀ "Panama, Chiriquí".
(c). *bixae* form. Unh white band rather narrow. Wings strongly excavate. Cilia F white only in space 1b: on H narrow and more or less intersected with brown at ends of veins. ♂ F 23 mm.

Sub-sp. **semidentata** Mabille 1877: "E. Peru". Peruvian specimens do not agree with Mabille's description: his collection (now in B.M.) contained 2 specimens, 1 labelled by him Cayenne and the other "*semidentata* P M ined". These agree with his description and the second specimen had been marked as his type from Fr Guiana.
B.M. 2 ♂ Fr Guiana. 3 ♂ "Surinam: coll Felder".
(d). Cilia F as in *semidentata*. Unh white basal area broader than half wing. Unf, in type and 2 other males, end cell defined by a white bar. ♂ F 25 mm. A ♂ with no locality has black cilia F: uph an apical bluish white area (as *hyperici*) cut by dark veins and unh the white area nearly reaches the termen.

Sub-sp. **peter** nov: ♂ Pará, Belem: type B.M.
B.M. 5 ♂ 13 ♀ Pará, Belem. 1 ♂ no loc.
(e). *phidias* form. This and the next sub-species may be specifically distinct from *intersecta*. Small, ♂ F 22 mm. Above purple instead of indigo blue. Top of tegulae next patagia red-haired. Cilia white throughout.

Sub-sp. **ilona** nov: ♂ Goyaz, R. Araguayra: type B.M.
B.M. Only the type.
(f). *phidias* form. Only differs from *ilona* in having the cilia yellow, as in *carriæ*.

Sub-sp. **chia** nov: ♂ Madeira River: type B.M.
B.M. 1 ♂ type. 1 ♂ St Paulo, Amazons.

3a (2). Patagia red, as in *charybdis* group of *Pyrrhopyge*.
3b (7a). ♂ pre-anal as well as anal segment of abdomen red. Genitalia as in *scylla* and *intersecta*.
3c (6). H cilia white.
3 (4a). H termen white bordered before cilia. ♂ F 26 mm. Wings more produced than usual: termens F and H quite straight. Palpi red: fore coxae black: end of tegulae next patagia more or less red spotted.

losca nov: ♂ Chapada, Matto Grosso: type B.M.

B.M. 1 ♂ Colombia (Atanques). 1 ♀ Bolivia. 4 ♂ Matto Grosso.

4a (3). H termen not white bordered before cilia. Wings more rounded. Tegulae near patagia conspicuously red.

4 (5). F cilia unsullied white. Shining dark blue rather than green. Head and anus crimson rather than red: when viewed sideways in sunlight, these red areas appear to have a shining blue bloom. ♂ F 26 mm.

lamprus Hopffer 1874: ♂ Brazil: MS fig of type in B.M. Fig Seitz does not show red spot on tegulae.

B.M. 1 ♀ Peru. 1 ♂ Minas Geraes. 5 ♂ Theresopolis. 3 ♀ Parana. 2 ♀ Santa Catharina. 1 ♂ 3 ♀ São Paulo. 1 ♂ 3 ♀ no loc.

5 (4). F cilia sullied, sometimes chequered at ends of veins (*margimmiscus*). Shining dark green rather than blue, but Rio specimens are bluer. Wings more produced than in *lamprus*, but not so much as in *losca*. ♂ F 28 mm.

menecrates Mabille 1878: ♂ Peru. Fig in Seitz, but red tegulae tips not shown: genitalia fig Bell 1931.

Synonym. *margimmiscus* Hayward 1935: ♂ Argentine.

B.M. 1 ♂ "Surinam". 1 ♂ "Venezuela". 2 ♂ São Paulo. 3 ♂ 2 ♀ Rio Janeiro. 3 ♂ 2 ♀ no loc. 9 ♂ Paraguay.

6 (3c). H (and F) cilia yellow: termen before cilia very narrowly paler yellow. In other respects resembles *losca*. ♂ F 26 mm.

carriæ Bell 1931: ♂ Paraguay: fig genitalia.

Synonym. *xanthomargo* Hayward 1942: ♀ São Paulo.

B.M. 1 ♂ Bolivia (Beni R.). 4 ♂ 1 ♀ Paraguay.

7a (3b). Only the anal segment of the abdomen red, as usual.

Cilia white. Tegulae not red-spotted. Cuiller of clasp with a projecting arm on the inner side: the cuiller is straight and not curved back as in the first 6 species.

7 (8). Fore coxae conspicuously red. Arm on inner side of cuiller over the upper edge of the valva. ♂ F 28 mm.

adonis Bell 1931: ♂ Paraguay: fig genitalia.

B.M. 14 ♂ 5 ♀ S. Brazil (São Paulo, Castro, Parana, Santa Catharina, Theresopolis). 9 ♂ Paraguay.

A.2. ELBELLA

8 (7). Fore coxae black, usually with a few red hairs. Arm on inner edge of cuiller midway between the valva and the tip of the cuiller. Wings more rounded, ♂ F 25 mm. An aberration from São Paulo has red colouring everywhere reduced to a few red hairs, cilia F black and on H conspicuously chequered, and genitalia as *mariae*. The genitalia are almost identical with those of *iphinous*.

mariae Bell 1931: ♂ Brazil: fig genitalia.

Synonym. ? *subnubilus* Hayward 1935: ♂ Argentine.

Identity only ascertainable by a genitalia examination.

B.M. 16 ♂ 5 ♀ S. Brazil (Blumenau, Theresopolis, Castro, Parana, São Paulo).

9a (1a). Anus brown: abdomen striped white or pale blue.

9 (10a). Upf with very broad orange markings, exactly as in *Mimoniades ocyalus* except that the spot in space 4 is conjoined to the spot in space 5 instead of to the spot in space 3. Genitalia very like *mariae*. ♂ F 26 mm.

II. Iphinous Group. Single species.

iphinous Latreille 1824: ♂ Brazil: type B.M.

Synonyms. *othello* Plötz 1879: Brazil. Genitalia fig Bell 1934.

mimetes Mabille 1909: ♂ Brazil: Latreille's type has a label on the pin marked "mimetes Mabille" in Mabille's writing: his reason for classing *iphinous* as a *Phocides* is unintelligible.

nigrita Zikan 1938: ♂ Itatiaya. Seems to be a variety with the blue bar at end of cell unf reproduced on upf.

B.M. 4 ♂ 3 ♀ (São Paulo, Estade Rio). 1 ♂ 2 ♀ are var *nigrita*.

10a (9). Upf with hyaline white spots and blue bands as in *Jemadia*. Patagia white lined and head with white dashes.

10b (16a). Upf hyaline apical spots continued to vein 4: only a single central spot in space 3. Uncus as in the *scylla* group. The species in this group can only be determined with certainty by genitalia examination.

III. Patrobas Group

10c (13a). Cuiller of clasp without an inward arm over the end of the valva.

10d (12). Back of clasp sinuous. Aedeagus as in *scylla*.
 10 (11). End of cuiller broadly bulbous. Uncus flanges long, slender, smooth. Upf generally, central band 3 mm. wide, no dot in space 9: basal blue band reduced, not crossing cell to costa, as in the other species. ♂ F 25-27 mm.

merops Bell 1933: ♂ Colombia: figured with genitalia.
 B.M. 7 ♂ Colombia (Bogota, Cundinamarca, Rio Chili).
 1 ♂ Villa Nova, L. Amazons. 2 ♂ Peru (Tarapote).

II (10). Cuiller long, slender, tapered, bisinuate. Uncus flanges short, broad and spined, as usual. Genitalia almost identical with those of *scylla* and *intersecta*. ♀ ostium short, broad and rounded as in *scylla*. Unf the blue bar at end of cell widely separated from the hyaline spot in space 3, and directed to a dot in space 9: usually apparent upf. A constant species throughout its range, though individually variable. ♂ F 28 mm.

theseus Bell 1933: ♂ Brazil: figured with genitalia. Fig Seitz as *patrobas*.
 B.M. 5 ♂ Colombia (Bogota, Muzo). 8 ♂ Ecuador (Rio Pastaza, Loja, Zamora). 20 ♂ 1 ♀ Peru (Charape, Chanchamayo, Pozuzo, La Merced, Tarapote, Yahuarmayo, Poynyo, Chaquimayo). 4 ♂ Bolivia (Apolobamba, Cochabamba). ♂ 1 Iquitos, Rio Cachiacu. 1 ♂ "Surinam" (coll Felder).

12 (10d). Back of clasp deeply indented centrally: cuiller slender, tapered, with a small square projection above the valva. Aedeagus as in *phidias*. ♀ ostium long, tapered and curved inwards. Varies geographically like many *Jemadia* or *Jemadia*-like species.

patrobas. 3 sub-species.

(a). Upf spot in space 3 narrow, linear, may be absent: central band 3 mm. wide. Uph outer band as wide as central band, rarely enters space 7. Unh with 2 blue spots at end of space 1b. ♂ F 28 mm.

Sub-sp. **patrobas** Hewitson 1857: ♂ Colombia: fig 1 (nec 2) on plate as *vulcanus*: genitalia of type in B.M. examined. Fig as *azeta*, with genitalia, G & S 1893, from a Guatemala specimen in B.M.: genitalia fig Bell 1933.

A.2. ELBELLA

The figures of *patrobas* of G & S and Bell are of *umbrata*. Seitz's fig of *patrobas* is *theseus*.

B.M. 3 ♂ Guatemala. 5 ♂ 2 ♀ Honduras. 1 ♂ 1 ♀ Nicaragua. 1 ♂ 2 ♀ Panama. 6 ♂ Colombia (Valdivia, Rio Chili). (b). Upf hyaline markings narrow, central band 2 mm., spot in space 3 linear or absent, blue bar end cell rarely present. Uph outer blue band much enlarged at apex, entering space 7 and tapering tornally: central band narrow, even absent (distinguishing character of *melanina*). Unh outer bands broad and often coalesced: central band often partially obsolete: spots at end of space 1b large and may be coalesced. ♂ F 29 mm.

Sub-sp. **melanina** Mabille & Boullet 1908? The type material consisted of 1 ♂ coll Boullet: 6 ♂ Peru: 4 ♂ Ecuador, coll Mabille. The only specimens in the B.M. corresponding with the description are specified below and one of them, from the Rio Tamana, bears a label "melanina" in Mabille's writing. Fig in Seitz.

B.M. 17 ♂ Colombia (Cauca Valley, Rio Dagua, Jimenez, Caloto, Bogota, El Tigre, Rio Tamana, Choco).

(c). As *patrobas*, but upf the spot in space 3 is well marked and broader. Uph blue bands narrow, of equal width. Unh blue spots at end of space 1b often absent. ♂ F 26–28 mm.

Sub-sp. **blanda** nov: ♂ Pebas, Amazonas: type B.M.

B.M. 1 ♂ Surinam. 2 ♂ Fr Guiana. 1 ♂ 1 ♀ Br Guiana. 3 ♂ Ecuador (Paramba, Macao). 2 ♂ Peru (Rio Colorado). 4 ♂ Bolivia (Reyes, Sara, Santa Cruz, Muschay, Santa Cruz de Sierra). 6 ♂ 1 ♀ Upper Amazons (Pébas, Iquitos, Tonantins, Cosnipata Valley). 1 ♂ Matto Grosso. 1 ♀ Maranhao. 1 ♂ Rio. 1 ♂ Espírito Santo. 5 ♂ Castro, Parana. 1 ♂ Paraguay.

13a (10c). Cuiller with an inward arm over end of valva. Back of clasp sinuous, not indented. Aedeagus as *phidias*. **13** (14a). Inward arm of cuiller broad throughout and at right-angles to the cuiller. Blue markings azure and brighter than usual.

azeta. 2 sub-species.

(a). Large, ♂ F 29 mm., resembling *patrobas*. Upf spot

in space 3 narrow, linear. Upf outer blue band tapering apically, entering space 7 and wider than the central band.
Sub-sp. ***lustra*** nov: ♂ Bogota: type B.M.

B.M. Only the type.

(b). ♂ F 26 mm. resembling *blanda*. Upf spot in space 3 broad: usually with submarginal blue spots between the hyaline apical spots and the apex. Uph bands sub-equal, outer band somewhat curved.

Sub-sp. ***azeta*** Hewitson 1866: ♂ St Paulo, Amazons: type B.M.: genitalia of type examined. The figs by G & S and Bell are of *patrobas*. Fig in Seitz resembles the type.
Synonym. *patroclus* Plötz 1879: ♂ Peru. Fig in Seitz.
B.M. 2 ♂ Upper Amazons (St Paulo, Pebas). 6 ♂ Peru (Perene, Chanchamayo). 2 ♂ Bolivia (Salampioni, Buena-vista). 1 ♂ Paraguay (Sapucay).

14a (13). Inward arm of cuiller tapering to a point and is directed to the lower dorsal corner of the clasp.

14 (15). Cuiller comparatively straight, tapering, tip not bent forward or sharply pointed. ♀ ostium long and broad, not tapering or curved inward.

***umbrata*.** 3 sub-species.

(a). Cuiller with the lower half of the inside quadrate. Small, ♂ F 26 mm. Upf spot in space 3 linear, as in *patrobas*.

Sub-sp. ***miodesmiata*** Röber 1925: ♂ Colombia, Magdalena Valley. Identity of name dependent on genitalia examination.

B.M. 3 ♂ Colombia (Popayan).

(b). Large, ♂ F 29 mm. Inner face of cuiller sinuous. Form resembling *melanina* and *lustra*. Upf spot in space 3 linear. Uph outer band tapering apically and entering space 7.

Sub-sp. ***acala*** nov: ♂ Manaure, Colombia: type B.M.: specimen fig as *patrobas* by G & S 1893: pl 74, figs 13, 14, 15. Genitalia fig Bell 1933 as *patrobas*.

B.M. 15 ♂ 1 ♀ Colombia (Bogota, Manaure, Valdivia).

(c). Form resembling *blanda*. ♂ F 26–28 mm. Upf spot in space 3 comparatively large, rectangular. Uph the 3 bands of same width. Clasp as *acala*.

A.2. ELBELLA

Sub-sp. **umbrata** Mabille & Boullet 1908? The type material was said to consist of 1 ♂ from Bolivia in coll Mabille (now in B.M.), which contained a ♂ from "Equateur", bearing on the pin a label "*umbrata*" in Mabille's writing. It agrees with the description and is believed to be the type.

B.M. 44 ♂ 2 ♀ Ecuador (Ambato, Rio Pastaza, Loja, Zamora). 27 ♂ N. & C. Peru (Chanchamayo, Pozuzo, Carabaya, Huambo, Charape). 8 ♂ 1 ♀ Bolivia (Yungas, Cochabamba, Sara, Santa Cruz, Santiago del Estero). 1 ♂ Pebas, Amazonas.

15 (14). Cuiller very slender throughout, sinuous, tip bent over and sharply pointed. ♀ ostium long and broad with a short central tapered point.

etna. 2 sub-species.

(a). Small, ♂ F 24 mm. Wings excavate. Upf spot in space 3 rectangular: central band 2 mm. wide. Uph outer band narrower than the central band.

Sub-sp. **etna** nov: ♂ Teffe, Amazons: type B.M.

B.M. 1 ♂ "Colombia (coll Felder)". 2 ♂ Fr Guiana. 7 ♂ 2 ♀ Amazons (Pará, Obidos, Ega, Teffe, Villa Nova, Pebas).

(b). ♂ F 26 mm. Wings not excavate. Uph bands sub-equal. Superficially like *patrobas*, *blanda*, *azeta* and *umbrata*, all of which appear to fly together in Peru, Bolivia and the Upper Amazons.

Sub-sp. **moda** nov: ♂ La Merced, Peru: type B.M.

B.M. 2 ♂ Peru (La Merced). 6 ♂ Bolivia (Sara, Santa Cruz, Santiago del Estero).

16a (16b). Upf hyaline apical spots do not extend below vein 5: usually 2 well-separated spots in spaces 3 and 4, not conjoined as in *Jemadia*.

IV. Polyzona Group

16b (18). Upf with the usual oblique blue bar in space 1b under the central hyaline band: apical spots reach vein 5.

16 (17). Upf apical spot in space 8 conjoined as usual to the rest of the band in spaces 5 to 7. Uncus slender, tip

excavate. Cuiller with a broad inward arm above the valva. ♀ ostium basally broad, tapering to a point.

polyzona. 5 sub-species.

(a). Upf hyaline spots in spaces 3 and 4 absent or just dots. Markings narrow. Inward arm of cuiller just below the tip. ♂ F 25 mm.

Sub-sp. **macleannani** Godman & Salvin 1893: ♂ Panama: type B.M.: figured with genitalia. Fig Seitz.

B.M. 2 ♂ Panama. 2 ♂ 2 ♀ Ecuador (Paramba).

(b). Upf all hyaline markings absent. Uph central and outer bands united. ♀ ostium as in (a) and (d). ? an aberration.

Sub-sp. **ahira** Hewitson 1871: ♀ Pará: type B.M.: figured. Fig Seitz.

B.M. Only the type.

(c). Above blue markings much broader and paler than usual: upf costa entirely blue up to end cell: upf central and outer bands equally wide. Upf spots in spaces 3 and 4 wide apart and placed centrally between the spots in spaces 2 and 5. Large, ♂ F 28 mm. Inward arm of cuiller rather nearer tip of cuiller than to valva.

Sub-sp. **polyzona** Latreille 1824: ♂ "Brazil": type B.M. Fig Seitz correctly except that the patagia are white lined, not dotted. There is no mention of Cayenne on the labels as stated by Bell 1933 on information given him from the B.M.

B.M. Only the type.

(d). Smaller, ♂ F 24–25 mm. Upf spots in space 3 and 4 well separated, not overlapping, placed nearer to the spot in space 5 than to the spot in space 2. Uph central band broader than the outer band. Inward arm nearer valva than tip of cuiller.

Sub-sp. **jaminia** Butler 1870: ♀ no loc: type B.M. Fig Seitz as *zonara* ♀ (nec ♂).

Synonym. *zimra* Hewitson 1871: ♀ no loc: type B.M.: figured. Fig in Seitz ♂ only: ♀ is *zesta*. Genitalia fig Bell 1933.

B.M. 2 ♂ 3 ♀ Amazons (Ega, St Paulo). 5 ♂ Peru (Perene, Rio Colorado, La Merced). 3 ♂ Bolivia (Santa Cruz, Buenavista).

A.3. ZONIA

(e). Like *jamina*, but upf hyaline markings broader, spots in space 3, 4 and 5 almost overlapping.

Sub-sp. **extrema** Röber 1925: ♀ no loc. Use of name dependent on examination of type.

B.M. 2 ♂ Matto Grosso. 1 ♂ São Paulo. 12 ♂ 1 ♀ Paraguay.

17 (16). Upf apical spot in space 8 detached from the apical row of spots in spaces 5, 6 and 7, and midway between the spots in spaces 7 and 9. Otherwise marked as *polyzona*. Uph central band rather broader than the outer band. ♀ ostium quite unlike that of *polyzona*: it is surrounded by a chitinous extension from the base of the ovipositor lobes. ♂ F 28 mm.

zesta nov: ♀ Fr Guiana: type B.M. Fig in Seitz as ♀ *zimra*. Bell 1933 in discussing *polyzona* describes 2 females from Fr Guiana, which are referable to *zesta*.
B.M. 3 ♀ Fr Guiana.

18 (16b). Upf without the oblique blue bar in space 1b under the central hyaline band: no apical spot in space 5 and with a detached spot in space 9. Uncus broader, divided. ♂ F 28 mm.

alburna Mabille 1891: ♂ Chanchamayo. Fig Seitz as *zonara* ♀: his fig of "alburnia U" represents *hewitsoni*. Fig Bell 1933 with genitalia.

1933 with genitalia.

B.M. 1 ♂ Amazons (Nauta). 1 ♂ Bolivia.

A.3. ZONIA Evans (p. 4): type *zonia* Evans: fixed by author.

In addition to the structural features, *zonia* differs from *Jemadia*-like species in several particulars. It generally resembles *Jemadia hewitsonii* in wing shape and disposition of markings. Upf the central hyaline band is continued to the costa by 2 hyaline streaks in spaces 11 and 12: it is also continued to vein 1 and the usual blue bar below the hyaline band is absent: a single large discal hyaline spot in space 3, which looks as large as the double spot in *hewitsoni*, because of the greater distance apart of veins 3 and 4:

A.4. NOSPHISTIA

apical band consists of 2 large spots in spaces 4 and 5, followed by 3 small spots in spaces 6, 7, 8 in a row along the upper edge of the spot in space 5 and there is an inner, completely detached spot in space 9. Upf the central band is hyaline, as in *Granila*, 1·5 mm. wide and continuous from vein 8 to vein 2: basal streaks as in *hewitsoni*, but the upper streak does not reach the central band: submarginal band narrow, macular, from vein 7 to vein 1b, broken outwards at vein 4. Unh as *hewitsoni*, but the central band is followed by a large double blue spot in space 1c. Striping of thorax etc. as in *hewitsoni*: head and patagia white dotted. ♂ F 29 mm.

zonia nov: ♂ Teffe (Ega), Amazons: 1st quarter: 1879.

M. de Mathan: type B.M.

B.M. Only the type.

A.4. NOSPHISTIA Mabille & Bouillet 1908: type *zonara* Hewitson: sole species included was *perplexus* Mabille, which is a synonym of *zonara*.

In addition to the structural features, *zonara* differs from all other *Jemadia*-like species in respect of the conspicuous blue bar at the end of the cell upf. It most closely resembles *Jemadia fallax* in that on upf the second blue band from the base is linked along the dorsum to the submarginal band. Upf the pale basal streak lies in space 1c, whereas in *fallax* it is in space 1b, on the other side of vein 1b. Head and patagia white lined. ♂ F 26 mm.: ♀ much larger, F 36 mm. The blue markings are variable: in Hewitson's type the submarginal band is reduced to two tornal dots: in Mabille's type the band is as well developed as in *fallax fiska*. The central band upf consists of a long spot across end cell, followed by 2 small detached spots at bases of spaces 2 and 3: in the ♀ and in Mabille's type there is a third inner spot under the origin of vein 2.

zonara Hewitson 1866: ♂ Amazons: type B.M. Fig Hew 1871: Seitz ♂ (nec ♀ which is *Elbella polyzona jamina* ♀). Fig Staudinger 1889 is *Jemadia hospita*.

Synonyms. *perplexus* Mabille 1878: ♂ Brazil: type B.M. Fig M & B 1912: genitalia fig Bell 1933.

A.5. JEMADIA

solaris Hayward 1942: ♂ St Paulo, Amazons: genitalia figured.

B.M. 1 ♂ 1 ♀ E. Colombia (Villa Vicencio). 1 ♂ Ecuador (Zamora). 2 ♂ Ega, Amazons. 2 ♂ "Amazons". 1 ♂ "Brazil".

A.5. JEMADIA Watson 1893: type *hospita* Butler: fixed by author.

Uncus generally as in *Pyrrhopyle*. Upf always with 4 apical hyaline spots in spaces 6 to 8: a conjoined double spot in spaces 3 and 4 and the usual central band in spaces 1c, 2 and cell: no spot in space 9 and no blue bar at end of cell.

Ia (5a). Uph no central blue band: outer band as usual and inner band composed of 3 more or less conjoined oblique basal streaks.

1b (3a). Upf submarginal blue macular band contiguous to the hyaline spots in spaces 3 and 5. Patagia white spotted.

1 (2). Uph upper and central basal streaks end in 2 separate points. Upf apical spots always wider than the spots in spaces 3 and 4. Unh outer band narrower than the space between it and the central band. Cuiller tapered and with an inward arm, placed nearer to the valva than to the tip of the cuiller.

hospita. 4 sub-species.

(a). Upf central band 1.5 to 2.5 mm.: spots in spaces 3 and 4 narrow, linear or absent. Uph basal streaks separate: outer band narrow, continuous, not entering space 7 and tapering to tornus. Very variable in Colombia, where it grades to *imitator*. ♂ F 27 mm.

Sub-sp. **pseudognetus** Mabille 1878: ♂ Colombia: type B.M. Fig as *hospita* with genitalia G & S 1893. Fig Seitz as *imitator*. Fig Staudinger 1889 as *zonara*.

Synonyms. *dorylas* Plötz 1879: ♂ Venezuela: photo of type in B.M.

paulensis Schaus 1902: ♂ São Paulo.

B.M. 3 ♂ 4 ♀ Guatemala. 5 ♂ 2 ♀ Nicaragua. 10 ♂ 7 ♀ Panama. 253 ♂ 6 ♀ Colombia (Bogota, Rio Chili, Popayan, Cerara, Muzo). 1 ♂ Venezuela. 15 ♂ 5 ♀ N. Ecuador (Paramba). 2 ♂ Ega, Upper Amazons. 1 ♂ "Lower

Amazon" labelled *ulixes* by Mabille. 1 ♂ Maranhan (Mt Aures). 1 ♂ Minas Geraes (Porto Real). 3 ♂ "Brazil". 1 ♂ "Paraguay".

(b). Upf blue markings conspicuously larger and brighter: central hyaline band narrower. Uph basal streaks tend to be confluent: outer band broader, crosses space 7. ♂ F 27 mm.

Sub-sp. **imitator** Mabille 1891: ♂ Colombia: type B.M. Fig Mabille & Vuillot 1893. Fig in Seitz is *pseudognetus*.

B.M. 52 ♂ 6 ♀ Colombia (Cauca Valley, Rio Dagua, Manizales, Honda).

(c). Upf central band broad 3 to 3.5 mm.: spots in spaces 3 and 4 well marked. Uph basal streaks tend to be confluent: outer band broad at apex, but tapers more acutely. ♂ F 27 mm.

Sub-sp. **hospita** Butler 1877: ♂ Peru: type B.M. Fig Seitz: fig genitalia Bell 1933. G & S figures are of *pseudognetus*. B.M. 14 ♂ S. Ecuador (Zamora, Loja). 36 ♂ Peru (Chanchamayo, Perene, Pichis Rd., Yahuarmayo, Tarapoto, Pozuzo, Moyabamba). 16 ♂ Bolivia. 1 ♂ Upper Putumayo. 4 ♂ Matto Grosso.

(d). Upf central band 2 to 2.5 mm.: spots in spaces 3 and 4 well marked as in *hospita*. Blue markings reduced. Uph basal streaks confluent, but outer band very narrow, macular, abbreviated, not reaching tornus in ♂. Wings excavate in ♂. ♂ F 26 mm.

Sub-sp. **ulixes** Plötz 1879: ♀ Surinam. Fig Seitz.

Synonyms. *hephaestos* Plötz 1879: ♂ Surinam. Fig in Seitz is *hospita* ♂. Described from a Surinam ♀ by Möschler 1882 as *hephaetus* Plötz and a photo of his type is in B.M.

lisetta Mabille & Boullet 1908: ♂ no loc (probably Surinam): type B.M. The type material was stated to be from Peru and Bolivia. The specimen in coll Mabille agrees with the description and is marked "lisetta" by Mabille.

B.M. 4 ♂ 1 ♀ Surinam.

2 (1). Uph upper and central basal streaks confluent, not ending in separate points. Upf spots in spaces 3 and 4

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wider than the apical spots. Blue markings paler and broader: uph outer band very broad at vein 7 and unh it is wider than the dark area separating it from the central band. Cuiller much broader at tip and without an inward arm. ♂ F 28 mm.

sosia Mabille 1878: ♂ no loc: type B.M. Fig Seitz as *gnetus*. Fig Bell 1933 with genitalia.

Synonyms. *zamorae* Mabille & Boullet 1908: no loc: type B.M.

hephaestus Plötz ♀, Mabille & Boullet 1908 (*nec* Plötz). B.M. 37 ♂ Colombia (Bogota, Rio Chili). 41 ♂ Ecuador (Loja, Zamora). 16 ♂ Peru (Perene, Chanchamayo). 4 ♂ Bolivia (Apolobamba, San Jacinto).

3a (1b). Upf submarginal blue band runs quite clear of the hyaline spots in spaces 3 and 5.

3 (4). Patagia white spotted. ♂ F 28 mm. Uph outer band tapers from vein 7 to vein 2 and then runs as a very thin line to space 1b. H termini centrally excavate in ♂: ♀ with a projecting tooth at end of vein 4.

menechmus Mabille 1878: ♂ no loc: type B.M. Fig Bell 1933, with genitalia as *gnetus*: fig Seitz as *gnetus* and his fig of *menechmus* is *albescens*.

Synonym. *aethiops* Gmelin 1790: no loc: homonym of *Papilio aethiops* Esper 1778.

B.M. 20 ♂ Colombia. 2 ♂ Venezuela. 2 ♂ Surinam. 7 ♂ 1 ♀ Ecuador. 25 ♂ Peru (Chanchamayo, Perene). 8 ♂ Bolivia. 14 ♂ Upper Amazons (Beni R., Rio Uaupes, Ega, St Paulo). 4 ♂ Matto Grosso.

4 (3). Patagia white lined. ♂ F 39 mm. Uph outer band evenly tapered throughout: sub-basal very broad, extending to middle of wing and much whiter than usual.

scomber Druce 1908: ♂ Pozuzo: type B.M.: figured. Fig Seitz as *perplexus*.

Synonym. *gigantea* Röber 1925: ♀ no loc.

B.M. 11 ♂ Peru (Pozuzo, Huanco, Rentema Falls, Rio Mixillo).

5a (1a). Upf with a central blue band.

5 (6a). Upf the central blue band short, from vein 7 to

vein 3, placed above 2 oblique basal streaks. Patagia white spotted. Upf submarginal blue band contiguous to the hyaline spots in spaces 3 and 5.

hewitsonii. 5 sub-species.

(a). Upf central hyaline band wide, 4 mm.: spots in spaces 3 and 4 narrow, 0.5 mm.: apical spots 1.5 mm. Uph outer band tapering quickly to a narrow line and apt to be discontinuous. ♂ F 26-27 mm.

Sub-sp. **pater** nov: ♂ Bogota: type B.M. Fig Seitz as *hewitsoni*.

B.M. 1 ♂ 1 ♀ Panama. 65 ♂ 1 ♀ Colombia (Bogota, Muzo, Cauca, Manizales, Jemenez, Magdalena Valley). 3 ♂ 2 ♀ Venezuela.

(b). Upf central band narrow, 1.5 mm.: spots in spaces 3 and 4, 0.5 mm. and apical spots 0.75 mm. Uph submarginal band very broad throughout and pale blue. ♂ F 25 mm.

Sub-sp. **ovid** nov: ♂ Ecuador, Paramba: type B.M.

B.M. 5 ♂ 1 ♀ Colombia (Bogota, Rio Tamana). 4 ♂ 2 ♀ N. Ecuador (Paramba. W. of Quito).

(c). Upf hyaline spots more equal; central 2.5 mm.: apical and those in spaces 3 and 4, 1.5 mm. Uph submarginal band narrow, macular and absent in middle of space 1c. ♂ F 31 mm.

Sub-sp. **albescens** Röber 1925: Macas, Ecuador. Identity of name dependent on a detailed examination of the type. Fig Seitz as *menechmus*.

B.M. 87 ♂ 3 ♀ Ecuador (Loja, Zamora, Ambato, Sarayacu, Rio Verde, Rio Napo, Rio Pastaza). 46 ♂ Peru (Charape, Pozuzo, Chanchamayo, Huancabamba, Moyabamba, Rio Inambari). 13 ♂ Bolivia (Cochabamba, Yungas—La Paz, Coroico, Apolobamba, Chulumani).

(d). Smaller, ♂ F 27 mm. As *albescens*, but upf central band wider, 3 mm. Uph submarginal band narrow, may be absent.

Sub-sp. **hewitsonii** Mabille 1878: ♂ Brazil (Amazons): type B.M., original of figure by Hewitson 1857 of *vulcanus*, fig 2. Fig of ♀ and ♂ genitalia Bell 1933.

Synonym. *lecerfi* Mabille & Boullet 1908: ♂ Guiana: figured. Fig Seitz.

B.M. 1 ♀ Fr Guiana. 4 ♂ 1 ♀ Peru (Ucayali, Rio Colorado,

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Rio Maranon, Yurimaguas). 9 ♂ 1 ♀ Amazons (Iquitos, Pebas, St Paulo, Santarem).

(e). Upf hyaline spots very large: central 4 mm.: apical and those in spaces 3 and 4, 2·5 mm. ♂ F 27 mm.

Sub-sp. **brevipennis** Schaus 1902: ♂ São Paulo.

B.M. 20 ♂ 2 ♀ Bolivia (Buenavista, Sara, Santa Cruz, Santiago del Estero). 28 ♂ Matto Grosso. 2 ♂ São Paulo.

6a (5). Uph the central blue band continuous from vein 7 to vein 1b: usual basal streaks absent, only a small pale dash at base cell and the dorsum whitish in spaces 1a and 1b. Patagia white lined.

6 (7). Upf the second blue band from the base ends at the dorsum and does not run along the dorsum towards the termen: the submarginal blue band runs quite clear of the hyaline spots in spaces 3 and 5. ♂ F 27–30 mm.

gnetus Fabricius 1781: ♀ Indiis: type B.M. (Banks coll). Fig by Seitz and Bell is *menechmus*.

Synonyms. *vulcanus* Cramer 1779: ♀ Surinam: homonym of *Papilio vulcanus* Cramer 1775. Fig Seitz.

suzetta Mabille & Boullet 1908: ♂ Bolivia: type B.M. Fig Bell 1933 with genitalia.

megalesius Plötz 1879 (MS) is *gnetus*.

B.M. 4 ♂ 4 ♀ Colombia. 1 ♂ Ecuador. 30 ♂ 1 ♀ Peru (La Merced, Perene, Tarapoto, Iquitos, Pebas, Rio Inambari).

7 ♂ 2 ♀ Bolivia (Mariapo, Buenavista, Cochabamba). 1 ♂ Br Guiana. 2 ♂ 1 ♀ Surinam. 10 ♂ 6 ♀ Brazil (Matto Grosso, Minas Geraes, São Paulo).

7 (6). Upf the second blue band from the base runs along the dorsum towards the termen and is usually linked to the submarginal blue band, which runs contiguous to the hyaline spots in spaces 3 and 5. ♂ F 26–27 mm.

fallax. 4 sub-species.

(a). Upf central hyaline band broader than in other forms, 3·5 mm. Uph submarginal band slender, macular, ending at costa in a large pale spot.

Sub-sp. **fiska** nov: ♂ Bogota: type B.M.

B.M. 16 ♂ 1 ♀ Colombia.

(b). Upf central band 2 mm. Uph the outer band tapering

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to a broad whitish costal area extending over the central band.

Sub-sp. **fida** nov: ♂ Peru, S. Domingo, Carabaya: 4,500 ft. October: G. Ockenden: type B.M.

B.M. 13 ♂ Ecuador (Rio Pastaza). 33 ♂ Peru (Rio Panaya, Rio Palcazu, Rentema Falls, Moyabamba, Chanchamayo, Rio Inambari, Chirimayo, Yahuarmayo).

(c). Upf central band narrow. Uph very like *fiska*, but unh the outer band is narrower and bluer.

Sub-sp. **filita** nov: ♂ Pebas: type B.M.

B.M. 20 ♂ 1 ♀ Upper Amazons (Iquitos, Pebas, St Paulo, Rio Uaupes). 1 ♂ Peru (Ucayali). 4 ♂ Br Guiana.

(d). Upf as *filita*. Uph outer band absent or faint: central band narrow, macular.

Sub-sp. **fallax** Mabille 1878: ♀ S. America: type B.M. Fig Seitz: fig with genitalia Bell 1933 as *zonara*.

B.M. 1 ♂ Br Guiana (New River). 2 ♂ Fr Guiana. 9 ♂ 2 ♀ Lower Amazons (Pará). 1 ♂ Mt Aures, Maranhão. 1 ♂ Goyaz.

A.6. MIMONIADES Hübner 1823: type *ocyalus* Hübner: sole species included.

Synonym. *Mahotis* Watson 1893: type *nurscia* Swainson: fixed by author.

Ia (4a). Uph without tawny markings. Uncus with side flanges.

1 (2a). Upf unmarked except for a broad central red or orange band crossed by whitish veins. Hind tibiae without the upper pair of spurs and the lower spurs on the hind and mid tibiae are ill-developed. Palpi black. ♂ F 28 mm.

nurscia. 3 sub-species.

(a). Unh with 3 narrow blue bands. Upf band narrower and redder than in other forms.

Sub-sp. **malis** Godman & Salvin 1879: ♂ Frontina, Colombia: type B.M. Fig Seitz: genitalia fig Bell 1933.

B.M. 87 ♂ 2 ♀ Colombia (Cauca, Manizales, Frontina).

(b). Unh entirely powdered pale blue, with a black subbasal band and outer border. Upf band pinkish orange. Uph blue markings faint. Unh with a dull purple tinge.

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An Ecuador ♂ has a red dot below the middle of vein 4. A few Ecuador specimens have a dark, postdiscal band unh indicating an approach to *malis* and some Peru specimens approach *amans*.

Sub-sp. **nurscia** Swainson 1821: no loc: figured. The fig in Seitz is nearer to *amans*: genitalia fig Bell 1933.

B.M. 1 ♂ Colombia (Frontina). 169 ♂ 4 ♀ Ecuador (Ambato, Zamora, Loja, Sarayacu, Rio Pastaza, Balzapamba, Rio Topo, Angamarca). 15 ♂ N. Peru (Cajamarca, Charape, Rentema Falls, Huambo).

(c). Like *nurscia*, but upf band clear orange. Upf blue markings more conspicuous. Unh paler. Cilia H sordid whitish. 1 ♂ has no spot in space 1b upf.

Sub-sp. **amans** Skinner 1920: Neiva, Colombia. Genitalia fig Bell 1933.

B.M. 89 ♂ Peru (Huancabamba, Chanchamayo, La Merced, Rio Colorado, Pozuzo, Poynyo, Rio Palcazu):

2a (1). Upf in addition to the broad central band with a double discal spot in spaces 3 and 4 and an apical band in spaces 5 to 8. Hind tibiae with 2 pairs of spurs.

2 (3). Upf without a sub-basal blue band: markings broad orange. Thorax not striped. Palpi black with a few white hairs. ♂ F 28 mm.

ocyalus Hübner 1823: Brazil: figured. Fig Seitz: genitalia fig Bell 1933.

B.M. 51 ♂ 13 ♀ Brazil (Minas Geraes, Parana, Espirito Santo, Novo Friborgo, São Paulo, Petropolis, Santa Catharina).

3 (2). Upf with a blue sub-basal band. Thorax, above, striped.

versicolor. 2 sub-species.

(a). Palpi below, black with a white central stripe. Anus dark brown; leg clothing white-haired; thorax striping above bluish grey. Upf central band orange. ♂ F 27 mm.

Sub-sp. **eupheme** Godman & Salvin 1879: ♂ Peru: type B.M. Fig Seitz: genitalia fig Bell 1933.

B.M. 1 ♂ Ecuador. 14 ♂ Peru (Rio Inambari, Cuzco, Marcapata, Cosnipata). 19 ♂ Bolivia (Chulumani, Yungas—La Paz).

(b). Palpi below, orange: also anus, leg clothing and striping of thorax, above. Upf central band crimson, outer markings yellow. ♂ F 25 mm. Some specimens (*montana*) have the blue markings uph much reduced and the thorax striping grey.

Sub-sp. ***versicolor*** Latreille 1823: ♀ Brazil: type B.M. Fig Seitz: genitalia fig Bell 1933.

Synonyms. *mulcifer* Geyer 1831: Brazil: figured.

montana Zikan 1938: ♂ Itatiaya.

B.M. 2 ♂ 1 ♀ "Colombia". 2 ♂ 2 ♀ "Bolivia" (coll Hewitson). 92 ♂ 22 ♀ Brazil (Pará, Minas Geraes, Parana, São Paulo, Petropolis, Santa Catharina, Espírito Santo).

4a (1a). Uph with tawny markings. Uncus without flanges.

4b (6a). Submarginal scaling not tawny, either blue, green or grey. Cilia chequered black and white.

4 (5). Lower inward arm of the cuillers of both clasps broad and more or less bifid. ♂ H termen conspicuously excavate above vein 2. Uph cubitus vein not darkened where it crosses the central tawny band. ♂ F 28 mm.

sela. 5 sub-species.

(a). In the first four forms the palpi and leg clothing are white, also the dots on the head: unh with white or bluish stripes on the black ground. In *sela* on uph, the discal and submarginal blue bands are very narrow blue, macular and becoming obsolete towards the apex. Upf submarginal blue scaling absent.

Sub-sp. ***sela*** Hewitson 1866: ♂ Colombia: type B.M.: name for specimen figured Hew 1861 as *pityusa* ♂. Fig Seitz.

B.M. 13 ♂ Colombia (Bogota, Sasumoca).

(b). As *sela*, but upf submarginal scaling present and uph the discal band consists of small orange, instead of blue, spots, which are sub-equal and do not extend above vein 7.

Sub-sp. ***aequatorea*** Röber 1925: ♂ Macas, Ecuador.

B.M. 1 ♂ Colombia. 58 ♂ Ecuador (Zamora, Lojas Sarayacu, Rio Pastaza). 11 ♂ N. Peru (Rentema Falls, Cajamarca).

(c). Upf the tawny discal band extends into space 7, but the spot in space 7 is not larger than the spot in space 6.

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Sub-sp. **peruviana** Draudt 1921: ♂ Peru (omitted in text).

Genitalia fig Bell 1934.

B.M. 32 ♂ Peru (Amazonas, Chachapoyas, Moyabamba, Huambo).

(d). Uph discal tawny band broadens apically and the spot in space 7 is much larger than the spot in space 6.

Sub-sp. **chanchamayonis** Strand 1920: Chanchamayo.

B.M. 83 ♂ Peru (Chanchamayo, La Merced, Río Colorado, Río Mixiollo, Loreto, Perene, Huanuco). 1 ♂ Bolivia (Yungas—La Paz).

(e). Upf like preceding forms, but unh with tawny bands on the black ground as in *pityusa*. Palpi and leg clothing, as well as spots on head tawny instead of white. Uph discal tawny band as wide as the central band. Unh discal tawny band wider than the central band.

Sub-sp. **periphema** Hewitson 1873: ♂ Bolivia: type B.M.: figured. Fig Seitz. Genitalia fig Bell 1934.

Synonym. *inaequalis* Röber 1925: ♂ Rio Songo, Bolivia.

B.M. 1 ♂ "Ecuador". 6 ♂ Peru (Marcapata, Caradoc). 18 ♂ S. Peru (Uruhasi, San Gaban, Rio Inambari, Cuzco, Chaquichaca). 46 ♂ 1 ♀ Bolivia.

5 (4). Lower inward arm of cuiller absent on left clasp: not divided on right clasp. Aedeagus very broad-ended and furnished with conspicuous spines. Generally resembles *periphema*: the tawny areas are much yellower and the black veins more conspicuous. Upf central band narrower and curved. Uph cubitus vein black where it crosses the central band, which is broken into 3 spots: discal band much wider than the central band and its outer edge is evenly convex, due to the termen not being excavate. Palpi, below, and legs yellow haired: yellow spotting of head vestigial: striping of thorax and abdomen less conspicuous. ♂ F 30 mm.

lomax nov: ♂ Marcapata, E. Peru: 4,500 ft.: type B.M.

B.M. 3 ♂ type loc. 1 ♂ La Oroya, Rio Inambari, Peru. 1 ♂ "Peru".

6a (4b). Submarginal scaling more or less tawny. Uph discal tawny band wider than the central band. Below, all markings tawny. Cuiller of both arms inwardly bifid:

the lower arm of the left clasp ill-developed. The genitalia of all the species are very similar and the only specific differences apparent are in respect of the spines on the ventral side of the aedeagus. ♂ F 27–30 mm.

6 (7a). Palpi and leg clothing below and the head spots tawny. Cilia H more or less chequered black and white. Uph the central dark band generally runs across space 7 to vein 8 and the veins are darkened: tawny colouring dull. On all wings the tawny submarginal scaling is extensive and generally present uph and unh as a narrow submarginal line. Aedeagus with 2 spines, one above the other. Very like *sela periphema*.

montra nov.: ♂ Huancabamba, Peru: type B.M.

B.M. 51 ♂ Peru (Huancabamba, Pozuzo, Cuzco, Chanchamayo). 5 ♂ "Cauca".

7a (6). Palpi and leg clothing below, black: head black. Submarginal scaling reduced and usually absent uph and unh. 7 (8a). H cilia chequered black and white. Uph tawny area paler and brighter: central black band not entering space 7 and veins 6, 7, 8 only faintly darkened, leaving the costal area broadly yellow. Aedeagus without any large projecting spines.

pityusa Hewitson 1861: ♂ Ecuador: figured, as the ♀, the ♂ being eliminated as *sela* by Hewitson 1866: type B.M. Synonyms. *aemulus* Skinner 1920: ♂ Ambato, Ecuador. *hemitenia* Röber 1925: ♂ Ecuador. Genitalia fig Bell 1934.

B.M. 36 ♂ Colombia (Bogota). 70 ♂ Ecuador (Ambato, Zamora, Rio Pastaza).

8a (7). H cilia black.

8 (9). Upf with the usual apical spots. Aedeagus with a double spine.

porus. 2 sub-species.

(a). Uph black with unusually narrow tawny hyaline markings: apical spot in space 5, discal spots in spaces 3 and 4, and spot in space 1b may be linear and even absent (*egena*). Uph bright ochreous as in *pityusa* but the dark central band usually crosses space 7. Unh dark border broad.

A.7. ARDARIS

Sub-sp. **porus** Plötz 1879: Colombia.

Synonyms. *punctiger* Mabille & Boullet 1908: no loc: figured.

egena Mabille & Boullet 1908: "Peru".

B.M. 34 ♂ Colombia (Cauca, Popayan, Siat Choco, Frontina, Manizales).

(b) Upf purple brown, instead of shining black: spots less reduced. Uph duller. Resembles *montra* and like that species has a yellow stripe along the dorsum from the base on unh.

Sub-sp. **mortis** nov: ♂ Peru, Amazonas, Chachapoyas: type

B.M.

B.M. 12 ♂ type loc.

9 (8). Upf the apical spots absent: remaining hyaline spots, in spaces 3 and 4, and the central band generally broad. Submarginal scaling obsolete. Aedeagus with a single spine.

minthe Godman & Salvin 1879: ♂ Ecuador, Rio Topo: type B.M. Fig Seitz.

Synonym. *angustifascia* Röber 1925: ♂ Macas, Ecuador.

B.M. 4 ♂ Colombia (Popayan). 84 ♂ Ecuador (Balzapamba, Loja, Rio Pastaza, Sarayacu, Rio Topo, Ambato, Zamora). 10 ♂ N. Peru (Charape).

A.7. ARDARIS Watson 1893: type *eximia* Hewitson: fixed by author.

Single species with unusual facies. Upf with a cell spot and a straight row of discal hyaline white spots from space 1b to space 7. Uph tawny with black borders and a black central band. Uncus rather like that of *Mimoniades pityusa*, undivided and without side flanges. ♂ F 25 mm.

eximia. 2 sub-species.

(a). H cilia black.

Sub-sp. **eximia** Hewitson 1867: ♂ Venezuela: type B.M. Fig Seitz.

18 ♂ 8 ♀ Venezuela.

(b). H cilia white. A paler mountain form with more rounded wings and narrower hyaline spots upf. The tawny colouring everywhere is yellower.

A.8. AMENIS

Sub-sp. **hantra** nov: ♂ Paramos de Companeiro, Est Merida, Venezuela: 13,500 ft.: 18th Sept. 1938: J. Hanbury Tracey: type B.M.
B.M. Only the type.

A.8. AMENIS Watson 1893: type *pionia* Hewitson: fixed by author.

The species are readily distinguished by the characteristic red spots upf. Genitalia of the *Pyrrhopuge* type.

1 (2). Upf with only 2 red spots. The claspers of the genitalia are asymmetric and vary somewhat, particularly in the left clasp. ♂ F 22 mm.

pionia. 3 sub-species.

(a). Cilia white. Unf white spot mid dorsum absent or rarely faint. Generally darker, red spots smaller.

Sub-sp. **picia** nov: ♂ Colombia: type B.M.

B.M. 39 ♂ 3 ♀ Colombia (Bogota, Rio Chili, Muzo).

(b). Cilia white. Unf with a conspicuous white spot mid dorsum, which is very rarely absent. Very much paler.

Sub-sp. **pionia** Hewitson 1861: ♀ Venezuela: type B.M.: figured. Though Hewitson specified "New Granada", he had in his collection 1 ♀ from Colombia and 1 ♂ 3 ♀ from Venezuela. He described *pionia* as having the white spot unf, adding in brackets "which is sometimes absent", as is only the case with his Colombian specimen. The specimen figured by him is a ♀ from Venezuela and is regarded as the type. Fig Seitz: genitalia fig G & S 1893 and Bell 1933.

Synonym. *similis* Röber 1925: ♂ Venezuela.

B.M. 15 ♂ 10 ♀ Venezuela (Merida, Caracas). 20 ♂ Bolivia (San José, Santa Cruz, Rio Pilcomayo to Rio Grande). 23 ♂ Argentine (Tucuman, Salta).

(c). cilia yellow. Otherwise as *pionia*.

Sub-sp. **ponina** Herrich-Schäffer 1869: no loc. Fig G & S 1893.

B.M. 3 ♂ 4 ♀ Venezuela (San Esteban).

2 (1). Above pale greenish with apical, discal and central red and orange spots. Palpi pale orange. Larger, ♂ F 25 mm.

A.9. HEGESIPPE

baroni Godman & Salvin 1895: ♂ Cajamarca, Peru: type
B.M.
B.M. 98 ♂ 94 ♀ type loc.

A.9. HEGESIPPE Evans 1948 (p. 5): type *hegesippe*
Mabille & Boullet 1908: fixed by author.

The species in this genus, when fully marked, closely resemble those of the genus *Sarbia*. Apart from the differences in venation and genitalia, the yellow band unh is immaculate in *Sarbia* and always more or less broken up or sullied before its outer edge in *Hegesippe*. The genitalia are of the *Elbella* type. Attention is drawn to the remarkable variation in *josepha*, recalling a similar type of variation found in *Aspitha agenoria*. Head, anus and palpi red.

1 (2). Cilia narrow, sullied yellow, inconspicuously crenulate on H. Very like *Sarbia xanthippe*. No red on abdomen below, only a narrow yellow streak at sides. ♂ F 24 mm.

hegesippe Mabille & Boullet 1908: ♂ "Bolivia": figured.
B.M. 2 ♂ 3 ♀ Parana (Castro). 2 ♂ no loc (ex coll Mabille).

2 (1). Cilia broad, bright yellow, conspicuously crenulate on H. ♂ F 28 mm.

luteizona 2 sub-species.

(a). With more or less well-developed yellow bands as in *Sarbia*. The figure of *martii* in Seitz, with a yellow bar at end of cell upf, represents the most fully developed variation. The figure of *luteizona* is of the usual form. A single male from Rio das Velhas has the markings upf reduced to small yellow spots (absent in space 1b) and uph with only a yellow smudge about end cell.

Sub-sp. **luteizona** Mabille 1877: ♂ "Mexico". Fig Mabille & Boullet 1908: Seitz.

Synonyms. *martii* Plötz 1879: Brazil. Fig Seitz.

amoena Röber 1925: ♂ São Paulo.

B.M. 10 ♂ 1 ♀ Brazil (Rio das Velhas, Caraca, São Paulo, Castro, Parana).

(b). Wings black unmarked, but in a side light there can be seen a darkening of the upf corresponding to the positions occupied by the spots in *luteizona*.

Sub-sp. *josepha* Plötz 1879: Brazil.

B.M. 3 ♂ Castro, Parana. This is an extreme form of *luteizona*, rather than a sub-species.

A.10. SARBIA Watson 1893: type *xanthippe* Latreille: fixed by author.

The genitalia conform to a general pattern. The uncus is deeply cleft into two narrow arms flanked by long thin flanges. The species resemble one another superficially, but are well defined by the differences in the form of the clasp.

1a (3a). Hind tibiae without the upper pair of spurs. Tegulae black. Yellow bands narrow. ♂ F 24 mm.

1 (2). Unh no markings interior to the discal band. Yellow bands very regular. Palpi with the outer half black, inner half and cheeks yellow. Cilia white in space 1c on H, elsewhere F and H black. Uncus with a spur at the back.

antias Felder 1859: ♀ Brazil: type B.M. Fig Felder 1867: Seitz: genitalia fig Bell 1934.

B.M. 32 ♂ 5 ♀ Brazil (Minas Geraes, Rio, Castro, Parana).

2 (1). Unh with a yellow spot at base of space 8. Yellow bands irregular. Entire palpi and cheeks yellow, as in rest of genus. Cilia F dusky, narrowly white on H. Uncus without a spur at back.

catomelaena Mabille & Boullet 1908: ♂ Minas Geraes: figured.

Synonym. *mello-leitaoi* Hayward 1942: ♂ Itatiaya: genitalia figured.

B.M. 1 ♂ Brazil (coll Mabille). 3 ♂ 1 ♀ Brazil (Caraca, Minas Geraes).

3a (1a). Hind tibiae with 2 pairs of spurs. Tegulae yellow.

3b (6). Unh the basal and central bands widely separated at costa. Uph no spot in the cell. Uncus arms long.

3 (4a). Apical spot in space 6 out of line. Back of cuiller straight or excavate: its end broad and not produced inwards, but there is a lower inward arm. Unh the basal band extends from costa to vein 1b. Unf with a yellow

streak on the costa from over the cell spot towards the apex. ♂ F 28 mm.

oneka. 2 sub-species.

(a). Yellow markings very narrow (1 mm.) and suffused with dusky scales. Upf cell spot reduced to a small lower spot. Uph band irregular and completely dislocated at origin of vein 3.

Sub-sp. **oneka** Hewitson 1866: ♀ Venezuela: type B.M.

B.M. 1 ♂ "Peru" (ex coll Mabille). 1 ♀ type.

(b). Yellow bands very broad (5 to 6 mm.). Upf apical and central bands just separated; just conjoined unh. The apical spot in space 3 is smaller than those in spaces 4 and 5, which are unusually broad, 3 mm. The spot in space 6 has its outer edge in line with the rest of the band, but its inner edge only reaches to the middle of the spots in spaces 5 and 7. Unf with narrow costal streaks linking the central and apical bands. Unh the yellow bands very broad, conjoined along veins 7 and 2, dividing the black area between the bands into 3 spots.

Sub-sp. **soza** nov: ♂ Castro, Parana: type B.M.

B.M. Only the type.

4a (3). Apical spots in spaces 5 and 6 completely overlapping. Back of cuiller curved. ♂ F 25 mm.

4 (5). Unh the basal yellow band only just enters the upper part of the cell. Upf apical and central bands widely separated.

damippe Mabille & Boullet 1908: ♂ Rio Grande do Sul: figured. Fig Seitz: genitalia fig Bell 1934.

B.M. 1 ♂ Venezuela (coll Godman & Salvin). 1 ♂ 1 ♀ Minas Geraes (coll Hewitson). 37 ♂ 28 ♀ S. Brazil (Parana, São Paulo, Villa da Lages, Santa Catharina, Rio Grande do Sul).

5 (4). Unh the basal yellow band extends across cell to below vein 2 and occasionally is linked to the central band at the lower end of cell. Uph spots of central band in spaces 1b and 2 tend to be outwardly diffuse and concave. Unh central band much more irregular than in *damippe*.

pertyi Plötz 1879: Brazil. Fig Seitz: genitalia fig Bell 1934.

A.II. METARDARIS

B.M. 9 ♂ 9 ♀ S. Brazil (Parana, Villa da Lages, São Paulo, Uniao da Victoria). 1 ♂ "British Guiana".

6 (3b). Unh space 8 entirely yellow from base to outer edge of the central band. Uncus very much shorter than the flanges. ♀ unf with a yellow streak along costa from the central band to the base.

xanthippe. 2 sub-species.

(a). Uph no spot in cell in ♂, vestigial in ♀. Unh below vein 8 the basal and central bands are wide apart. Large, ♂ F 27 mm.

Sub-sp. **xanthippe** Latreille: ♀ Brazil: type B.M. Fig in Seitz might be of a small ♂.

B.M. 1 ♀ Brazil, type. 1 ♂ 2 ♀ Minas Geraes, Caraca.

(b) Smaller, ♂ F 25 mm. with much broader yellow markings. Upf usually with a spot in space 1b between the central band and the base: yellow bands contiguous at vein 3. Uph always with a cell spot and the central band is usually produced in space 8 to over this spot. Unh very variable: the 2 bands may be completely conjoined, leaving only a narrow black bar at end of cell, or they may be separated by a narrow black band.

Sub-sp. **spixii** Plötz 1879: ♂ Brazil. Fig Seitz: genitalia fig Bell 1934.

B.M. 1 ♀ Minas Geraes (coll Hewitson). 17 ♂ 5 ♀ S. Brazil (Parana, São Paulo, Villa da Lages, Santa Catharina, Sul de Minas).

A.II. METARDARIS Mabille 1903: type *cosinga* Hewitson: sole species included.

Single species exhibiting a great range of variation in respect of the size of the markings, their colour and the extent to which they are dusted over with darker scales. In this connection the remarks recorded by Bell 1934 are of interest. The B.M. material can be divided into 4 reasonably well-defined series, which, though variable, do not intergrade with one another and may be regarded as ecological sub-species, their differences being due to differences of an ecological nature, such as food plants,

A.12. MYSORIA

times of emergence, temperature, etc. ♂ F 30 mm.
Genitalia of the *Sarbia* type.

cosinga. 4 sub-species.

(a). Head, palpi and anus orange brown. Markings above, pale yellowish grey. Below, lemon yellow.

Sub-sp. **catana** nov: ♂ Limbani, Carabaya, Peru; type B.M. B.M. 28 ♂ 16 ♀ Peru (Cajon, Cuzco, Acopampa, Carabaya, Oconeque, San Domingo, Huanco, Rio Palcazu). 4 ♂ Bolivia (Incachaca).

(b). As *catana*, but unh pale orange.

Sub-sp. **circe** nov: ♂ Yungas—La Paz, Bolivia: type B.M. B.M. 7 ♂ 3 ♀ Bolivia (Yungas—La Paz).

(c). Head, palpi and anus red. Below pale orange like *circe*. Above, markings bright yellow: upf centre of space rib rarely crossed by a central black bar as in other forms: uph yellow areas clearer than usual.

Sub-sp. **cedra** nov: ♂ Abre de Colomi, Bolivia: type B.M. B.M. 1 ♂ Cuzco (Cajon). 3 ♂ 1 ♀ type loc. 2 ♂ Bolivia (San Antonio). 11 ♂ "Bolivia".

(d). Head, palpi and anus red to crimson. Above and below typically orange, grading through specimens with reduced red areas (*sanguinea*) to very dark specimens almost or quite devoid of markings above (*obscura*) and below with dark-red areas.

Sub-sp. **cosinga** Hewitson 1874: ♂ Bolivia: type B.M. Fig Seitz: genitalia fig Bell 1934.

Synonyms. *sanguinea* Mabille 1903: ♂ Bolivia: type B.M. *obscura* Mabille 1903. Bolivia.

territa and *stygiana* (Staudinger MS) Mabille 1903.

B.M. 4 ♂ Peru (Cuzco, Challabamba). 21 ♂ 14 ♀ Bolivia (La Paz).

A.12. MYSORIA Watson 1893: type *barcastus* Sepp: type fixed as *acastus* Cramer, which name, being a homonym, is replaced by *barcastus*, the oldest valid name for the species described by Cramer.

Genitalia of the *Pyrrhopuge* type: uncus divided and furnished with side flanges. A characteristic of the genus is the presence, below, of a coloured stripe along the thorax at the base of the wings, and more or less continued along the sides

of the abdomen, which is also often red on each segment below the stripe. Anus red. Cilia usually white.

Ia (4a). Unh costa and termen edged yellow or red. Wings otherwise unmarked.

I (2a). Unh costa red edged. Collar red, also cheeks and palpi except at end. Below, thoracic stripe red. ♂ F 24–26 mm.

barcastus. 6 sub-species.

(a). H veins 3 and 4 not stalked. Wings not produced and termen H convex. Cuiller of clasp ending in a point, not produced and curved inward. Unh red costal margin narrow and even to inner edge of the yellow border along the termen, which is narrow, 1.5 mm. wide, and tapering to just below vein 2. Cilia white throughout, appearing narrow as the white colouring does not extend to the wing.

Sub-sp. **ambigua** Mabille & Boullet 1908: no loc: type B.M. with label "Honduras, San Pedro, Sula".

Synonym. *proxima* Mabille & Boullet 1908; ♀ no loc: type B.M. (believed to be from Mexico).

B.M. 3 ♂ 1 ♀ Mexico. 2 ♂ 1 ♀ Guatemala. 10 ♂ 8 ♀ Honduras. 2 ♂ Nicaragua. 8 ♂ 1 ♀ Costa Rica.

(b). H veins 3 and more or less stalked. Cuiller of clasp produced at tip and curved over, nearly to the length of the lower arm. Wings more produced, termen H straight or excavate. Unh typically the yellow border is broad, 3 mm. wide at space 6 and tapers to vein 1b. There is a tendency for the white colouring of the cilia to extend on to the wing, causing the cilia to appear wider. Unh the red costal border is generally up to the yellow border, but often it is reduced outwardly and may even be absent (*pallens*). The cilia are generally white throughout: rarely they are more or less dusky on F (*cayennae*).

Sub-sp. **venezuelae** Scudder 1874: Venezuela. Fig Seitz: genitalia fig G & S 1893 and Bell 1933.

Synonyms. *acastus* Cramer 1775: Surinam: figured: homonym of *acastus* Linnaeus 1758. Cramer's second figure in 1779 is *barcastus*.

pallens Mabille 1891: "Brazil": specimens agreeing

A.12. MYSORIA

with the description in B.M. from Colombia and Br Guiana.

decolor Mabille & Boullet 1908: Colombia: type B.M. An aberration with the yellow border unicolor a sordid white.

cayennae Mabille & Boullet 1908: ♂ Cayenne: type B.M. Fig in Seitz is *barcastus*.

caucana Röber 1925: ♂ Cauca, Colombia.

B.M. 26 ♂ 12 ♀ Panama. 92 ♂ 3 ♀ Colombia. 79 ♂ 6 ♀ Venezuela. 4 ♂ 2 ♀ Tobago. 8 ♂ 4 ♀ Br Guiana (Roraima). 3 ♂ 3 ♀ Fr Guiana. 1 ♂ 1 ♀ Minas Geraes (Porto Real).

(c). Differs from *venezuelae* in being smaller and darker, due to the cilia F being entirely dusky and more or less darkened on H.

Sub-sp. **alta** nov: ♂ Trinidad: type B.M.

B.M. 32 ♂ 9 ♀ Trinidad. 1 ♂ Br Guiana (Essequibo River).

(d). Unh submarginal band red instead of yellow, narrower than in *venezuelae*, broader than in *ambigua*. Wings very produced and smaller.

Sub-sp. **barcastus** Sepp 1855: ♀ Surinam: figured. Fig Cramer 1779 as *acastus*: Seitz as *cayennae*.

Synonym. *verbena* Butler 1869: ♀ S. America: type B.M. B.M. 2 ♀ Br Guiana (Berbice, Blairmount). 12 ♂ 3 ♀ Fr Guiana. 3 ♂ 7 ♀ Surinam.

(e). Along the Amazons there is a partial reversion towards *ambigua*. The wing shape is like *venezuelae* and veins 3 and 4 H are stalked, but the yellow border is narrow as in *ambigua*: the red costal border runs evenly to the edge of the yellow border.

Sub-sp. **antila** nov: ♂ Santarem: type B.M.

B.M. 1 ♂ 1 ♀ Lower Madeira River. 11 ♂ 4 ♀ Lower Amazons (Pará, Santarem, Obidos to Itaituba). 15 ♂ 7 ♀ Upper Amazons (St Paulo, Pebas, Ega, Rio Negro, Rio Ucayali).

(f). In Brazil, south of the Amazons, there is an even more complete reversion to *ambigua* both in respect of wing shape and the width of the yellow border, but veins 3 and 4 H are usually stalked and there is a marked tendency for the yellow border to run along the costa,

replacing the red costal border, generally for about 1·5 mm., but in some Bolivian specimens only a very short length of the red border remains at the base. The white cilia are narrow like *ambigua*, as the white colouring does not extend to the wing.

Sub-sp. **barta** nov: ♂ Paraguay: type B.M.

B.M. 1 ♂ "Peru". 7 ♂ Bolivia (Santa Cruz, Bueyes). 2 ♂ Goyaz. 1 ♀ Maranhão. 1 ♂ Bahia. 24 ♂ 3 ♀ Matto Grosso. 2 ♂ 1 ♀ Parana. 24 ♂ 4 ♀ São Paulo. 3 ♂ 1 ♀ Rio Grande do Sul. 42 ♂ 4 ♀ Paraguay. 7 ♂ Argentine (Misiones).

2a (1). Unh costa and termen narrowly yellow edged. Cheeks and palpi, except at tip, red. H vein 3 from before end cell, but in 3 females of *affinis* veins 3 and 4 stalked.

2 (3). Below, a red stripe on either side of the thorax and abdomen. Collar black. ♂ F 28 mm.

amra Hewitson 1871: ♂ Mexico: type B.M.: figured. Fig Seitz: genitalia fig G & S 1893 and Bell 1934.

Synonym. *brasiliensis* Mab 1903: "Brazil".

B.M. 21 ♂ 5 ♀ Mexico. 1 ♂ Guatemala.

3 (2). Below a yellow stripe on either side of the thorax and abdomen. Collar red. ♂ F 28 mm.

affinis Herrich-Schäffer 1869: no loc. Fig G & S 1893, with genitalia: Seitz: genitalia fig Bell 1934.

B.M. 74 ♂ 6 ♀ Mexico. 1 ♂ 2 ♀ Guatemala.

4a (1a). Unh costa and termen not coloured differently from rest of wing.

4 (5). Unmarked: veins below, conspicuously black. Below, junction of wings with thorax narrowly pale yellow. Palpi black. H veins 3 and 4 from lower end of cell or just stalked. ♂ F 27 mm.

thasus. 3 sub-species.

(a). Unh dark green. Collar red and usually a red spot between the antennae. Cheeks red. A dark form.

Sub-sp. **thasus** Stoll 1781: Surinam: figured. Fig Seitz: genitalia fig Bell 1934.

B.M. 1 ♂ Costa Rica. 49 ♂ Colombia. 2 ♂ Venezuela.

3 ♂ Fr Guiana. 16 ♂ Upper Amazons (Iquitos,

A.13. MICROCERIS

Upper Putumayo, Pebas, Moyabamba, Rio Uaupes).
15 ♂ Matto Grosso (Porto Velho). 1 ♂ São Paulo.

(b). Unh violet grey. Collar and cheeks black, or with a few red hairs.

Sub-sp. *sejanus* Höpffer 1874: ♂ Peru. Fig Seitz.

B.M. 43 ♂ Ecuador (Sarayacu, San Francisco, Loja, Zamora). 7 ♂ N. Peru (Rentema Falls). 50 ♂ Peru (Chanchamayo, Rio Colorado, Perene, La Merced, Palcazu).

(c). Unh pale violet grey. Above paler, purple brown. Collar red centred, a red spot between antennae. Cheeks red.

Sub-sp. *erythrostigma* Röber 1925: Bolivia.

B.M. 38 ♂ Bolivia (Cochabamba, Salampioni, Ernesto, Yungas—La Paz).

5 (4). Upf, unf and unh with a narrow dull yellow central band. Abdomen above with the 5 pre-anal segments centrally red. Below extreme base of wings adjoining thorax narrowly red. Palpi centrally red and cheeks red. Collar red and a red spot in front of each antenna. Femora of all legs outwardly red. H vein 3 from before end cell. ♂ F 27 mm.

galgala Hewitson 1866: ♂ Venezuela: type B.M. Fig Seitz: genitalia fig G & S 1893 and Bell 1934.

Synonym. *strigifera* 1867: ♂ Venezuela: figured: type B.M.

B.M. 1 ♂ 1 ♀ Panama. 11 ♂ 2 ♀ Colombia. 23 ♂ 6 ♀ Venezuela.

A.13. MICROCERIS Watson 1893: type *variicolor* Ménétries: fixed by author.

Single species with a peculiar facies. Above with narrow dark ochreous markings and a narrow, highly zigzag submarginal green line in both wings, recalling the Oriental species *Odina decorata*. Termen H conspicuously crenulate. Genitalia of the *Elbella* type: uncus narrow, undivided, with short spined flanges. ♂ F 21 mm.

variicolor Ménétries 1855: ♂ Minas Geraes: figured. Fig Seitz: genitalia fig Bell 1934.

B.M. 16 ♂ 1 ♀ Matto Grosso (Chapada, Tombador, Nivaa).

A.14. CRONIADES Mabille 1903: type *pieria* Hewitson: fixed by Lindsey 1925.

A somewhat isolated genus of two yellow-banded species with produced wings.

1 (2). Upf spots in spaces 3 and 4 apart and widely separated from the sub-apical spots. Uph ochreous with 2 black bands and a black margin.

pieria. 2 sub-species.

(a). F central band hyaline. Uph orange, discal band tapers to dorsum: costa above vein 7 dark brown. Unh with a dark spot in space 7 between the inner and central dark bands. ♂ F 26 mm.

Sub-sp. **pieria** Hewitson 1857: ♀ Amazons: type B.M.: figured. Fig Seitz: genitalia fig Bell 1934.

B.M. 3 ♂ Fr Guiana. 6 ♂ 6 ♀ Amazons (Santarem, St Paulo, Rio Tapajos).

(b). F central band opaque, scaled over unf. Uph yellower, discal band tapering to costa: space 7 yellow between the discal and central dark bands. Unh no dark spot in space 7 between the inner and central bands. ♂ F 27 mm.

Sub-sp. **auraria** Druce 1908: ♂ Farinas, Bolivia: type B.M. B.M. 2 ♂ Peru (Pozuzo, San Ramon). 1 ♂ Bolivia (type).

2 (1). Upf spots in spaces 3 and 4 in line with the sub-apical spots. Uph dark brown, with a broad yellow central band. Unh no dark spot in space 7. ♂ F 26 mm: ♀ 30 mm.

machaon Westwood 1851: ♂ Brazil: type B.M.: figured. Fig Seitz: genitalia fig Bell 1934.

B.M. 24 ♂ 29 ♀ Brazil (Minas Geraes, São Paulo, Parana, Santa Catharina).

A.15. AZONAX Godman & Salvin 1893: type *typhaon* Hewitson: fixed by authors.

A single species closely allied to *Myscelus* but differing in respect of the falcate forewing, the divided uncus and the numerous hyaline spots on both wings. ♂ F 27 mm.

typhaon Hewitson 1877: ♂ Nicaragua: type B.M. Fig G & S 1893: Seitz.

B.M. 1 ♂ Nicaragua. 1 ♀ Br Guiana.

A.16. MYSCELUS

A.16. MYSCELUS Hübner 1819: type *nobilis* Cramer: fixed by Butler 1870.

Synonym. *Agara* Mabille & Boullet 1908: type *pardalina* Felder: sole species included.

All males have dense brushes on the inside of the femora and tibiae of the hind legs.

1a (3a). Upf apical spot in space 8 shifted inwards, so as to be widely separated from the spots in spaces 6 and 7. Uph conspicuous hyaline cell spot: a narrow black discal band followed by a similar postdiscal band, so that there are two bars in spaces 4-5.

1 (2). Upf hyaline spot in space 1b rectangular and reaches vein 1. Uph the black markings macular, separated into spots by the veins: postdiscal band not disrupted at vein 2. Unh with a sub-basal band, and the central and discal bands are continued into space 6. Above, golden orange, veins F black: ♀ duskier and veins blacker, otherwise like ♂. Cuiller serrate at end. ♂ F 23 mm.

nobilis Cramer 1779: ♀ no loc: figured. Fig in Seitz is *amystis mysus*.

Synonyms. *salus* Fabricius 1781: Surinam. *nobilis* Cramer is placed as a synonym without reason and the description applies to *nobilis* or *amystis*.

illustris Mab 1903: ♂ Bolivia: type B.M. ♀ fig Seitz. Genitalia fig by Bell 1934 are *amystis mysus*.

B.M. 1 ♂ 1 ♀ Surinam (coll Felder). 3 ♂ 1 ♀ Amazons (Obidos, Ega, Pebas, Tarapote). 13 ♂ Bolivia (Sara, Santa Cruz de la Sierra, Buenavista, Muschay, Beni R., San Mateo).

2 (1). Upf hyaline spot in space 1b either confined to the upper half of the space or produced as a triangle to vein 1. Uph black markings linear, continuous: postdiscal band disrupted at vein 2. Unh no sub-basal band. ♀ differs from ♂ considerably, browner and excavation of termen H above vein 4 very pronounced. End of cuiller smooth. ♂ F 22 mm.

amystis. 6 sub-species.

(a). In the first five forms the spots of the central band upf have the inner edges in line and the ♀ unh has the entire outer half of the wing brown, more or less obscuring the dark bands. In the first two forms, unh the central and discal bands generally reach vein 8 and outer band may be double in space 7: *hages* is ochreous rather than brown above and unf the veins are dark.

Sub-sp. **hages** Godman & Salvin 1893: ♂ Panama: type B.M.: figured with genitalia. Fig in Seitz is *muttra*. Genitalia fig Bell 1934.

B.M. 5 ♂ Mexico. 1 ♂ Guatemala. 9 ♂ 3 ♀ Honduras. 3 ♂ Panama.

(b). Above brown rather than ochreous. Unf with extensive brown shading along termen and about the hyaline spots.

Sub-sp. **muttra** nov: ♂ Cauca Valley, Colombia: type B.M. Fig Seitz as *hages*.

B.M. 6 ♂ Colombia (Popayan). 82 ♂ Colombia (Cauca Valley).

(c). In the next 3 forms space 7 unh is generally devoid of markings. Typical *amystis* is the palest form: above, yellow, paler than *hages*: markings and darkening of veins much less pronounced, above and below.

Sub-sp. **amystis** Hewitson 1867: ♂ Colombia: type B.M. Fig Hewitson 1873: Seitz.

Synonyms. *rogersi* Kaye 1913: ♀ Trinidad.

flavicollis Röber 1925: ♀ no loc.

B.M. 14 ♂ Colombia (Bogota, Santa Maria, Lake Saptosa). 5 ♂ Venezuela. 1 ♂ 1 ♀ Trinidad.

(d). The only specimens in B.M. from Ecuador are intermediate between *muttra* and *amystis*. Above, rather paler than *muttra*: unf brown shaded, but without black edgings to the spots. Unh outwardly browner up to the hyaline spot and the dark bands fainter, as in females. A distinct form, but whether Röber's name is applicable is doubtful.

Sub-sp. **distinctus** Röber 1925: Ecuador.

B.M. 3 ♂ Ecuador (Arenillas).

(e). Like *amystis* but the dark markings and dark veins

A.16. MYSCELUS

much more conspicuous and the colouring more orange. Unf hyaline markings heavily black-edged. Superficially resembles *nobilis*.

Sub-sp. **mysus** nov: ♂ Tarapote, E. Peru: type B.M. ♂ fig Seitz as *nobilis*: genitalia fig Bell 1934 as *illistris*.

B.M. 23 ♂ Peru (Tarapote, Perene, Ucayali, Carabaya).

25 ♂ Bolivia (Reyes, Sara, Santa Cruz de la Sierra, Muschay, Beni R., Buenavista, Santiago del Estero).

(f). Upf central spot of central band shifted outwards. ♂ unh uniform yellow, markings faint or absent: above like *amystis*. ♀ below, basal areas whitish, outer half unh pale brown, dark markings conspicuous.

Sub-sp. **epigona** Herrich-Schäffer 1869: no loc. ♂ fig Seitz: genitalia fig Bell 1934.

Synonyms: *orthrus* Hewitson 1877: ♀ Brazil: type B.M.

Mis-spelt *aethras* Mabille 1903.

sothis Mabille 1883: ♀ Brazil: type B.M.

orbius Mabille 1883: ♂ Brazil: type B.M. ♂ fig Mabille 1903: ♀ fig Seitz.

meridionalis Röber 1925: Santa Catharina.

B.M. 1 ♀ "Rio Negro". 2 ♂ "Peru". 41 ♂ 16 ♀ Brazil (Minas Geraes, Matto Grosso, Parana, Santa Catharina, Rio Grande do Sul). 55 ♂ 8 ♀ Paraguay, 4 ♂ Argentine.

3a (1a). Upf apical spots in spaces 6, 7, 8 conjoined.

3 (4a). Uph with a faint discal and postdiscal band beyond the conspicuous hyaline cell spot, as in *amystis* and *nobilis*. ♂ F 24 mm.

phoronis. 2 sub-species.

(a). Unh no basal or central dark band: outer half dark brown, the discal and postdiscal bands faint.

Sub-sp. **caucanus** Staudinger 1888: ♂ Cauca Valley.

Synonym. *persela* Mabille 1891: ♂ Cauca Valley.

B.M. 22 ♂ Colombia (Cauca, Manizales, Rio Nabasco).

(b). Unh with a basal and a central dark band: outer half shaded brown, bands thereon conspicuous.

Sub-sp. **phoronis** Hewitson 1867: ♂ Colombia: type B.M.

Fig Hew 1873: Staudinger 1888: Seitz: genitalia fig Bell 1934.

B.M. 2 ♂ Panama. 25 ♂ Colombia (Bogota). 52 ♂

Ecuador (Zamora, Loja, Ambato, Sarayacu). 120 ♂ Peru (La Merced, Rio Colorado, Chanchamayo, Amazonas, Chachapoyas, Huancabamba, Pozuzo, Cosnipata, Carabaya). 34 ♂ Bolivia (Yungas, La Paz, Cochabamba, Apalobamba, Bueyes, Cusillami, Chairo).

4a (3). Uph with only one dark band between cell and termen.

4b (8a). Upf spots in spaces 3 and 4 as large as the cell spot.

4c (6a). Unh no sub-basal band and the central band short or broken, not extending into space 8. Above dark red.

4 (5). Uph with a small hyaline cell spot. Aedeagus bifid, also tip of cuiller bifid. ♂ F 26 mm.

belti Godman & Salvin 1879: ♀ Nicaragua: type B.M. ♀ fig G & S 1893: Seitz. Genitalia fig of G & S 1893 and Bell 1934 are *pegasus*.

B.M. 1 ♂ 1 ♀ Guatemala. 1 ♂ 5 ♀ Nicaragua. 1 ♀ Costa Rica. 1 ♀ Venezuela (with a narrow macular submarginal band of dusky whitish scaling on upf).

5 (4). Uph no hyaline spot. Aedeagus and tip of cuiller undivided. Unh no dark spot on costa near base, as in *belti*. ♂ F 24 mm.

pegasus. 2 sub-species.

(a). Unh dark central band reduced to a spot in space 1c: discal band extends to vein 4 and is separated from the dark border. In a ♀ from Costa Rica the central band crosses the cell, the discal band reaches vein 7 and there is a detached spot in space 7 between the two bands.

Sub-sp. **perissodora** Dyar 1915: Mexico. Genitalia fig as *belti* by G & S 1893 and Bell 1934.

B.M. 1 ♂ Nicaragua. 1 ♂ 1 ♀ Costa Rica. 1 ♀ Panama.

3 ♂ 1 ♀ Colombia (Popayan). 35 ♂ 1 ♀ Colombia (Cauca).

(b). Unh very variable: in the type the central band reaches vein 7 and the discal band is completely united to the dark border: in some specimens the discal band is separate and may reach space 7.

Sub-sp. **pegasus** Mabille 1903: ♂ Cayenne: type B.M.: figured. Fig Seitz, but the red colouring is incorrect: also fig Seitz as *epimachia* underside.

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B.M. 4 ♂ 1 ♀ Venezuela. 1 ♂ Fr Guiana. 1 ♀ Ecuador.

6a (4c). Unh with a well-marked sub-basal band, a central band reaching space 8 and a discal band completely detached from the dark border. Aedeagus undivided: tip of cuiller bifid. ♂ F 25 mm.

6 (7). Uph no hyaline cell spot and veins not darkened.
epimachia 3 sub-species..

(a). Above dark red as *belti*. Below, pale areas white or very pale yellow, instead of sulphur yellow as usual. Unh discal band more narrowly separated from the dark border.

Sub-sp. **verina** nov: ♂ Zamora, Ecuador: type B.M.

B.M. 1 ♂ 1 ♀ Zamora. 1 ♀ Ambato, Ecuador.

(b). Above brownish ochreous. Upf hyaline spot in space 5 absent or a detached dot. Unh discal band not entering space 7, except occasionally in Brazil.

Sub-sp. **epimachia** Herrich-Schäffer 1869: no loc. Fig Hewitson 1873. Fig Seitz as *santhilarius*: the figures of *epimachia* are *draudti* for upperside and *pegasus* for underside. Genitalia fig Bell 1934.

B.M. 3 ♂ Colombia (Bogota). 1 ♂ Venezuela. 1 ♂ Ecuador. 46 ♂ 1 ♀ Peru (Chanchamayo, Huancabamba, La Merced, Rio Colorado, Moyabamba, Amazonas, Chachapoyas, Tarapote, Pozuzo, Yahuarmayo). 10 ♂ 1 ♀ Bolivia (Reyes, Apalobamba, Sara, Santa Cruz). 5 ♂ 1 ♀ Matto Grosso. 1 ♂ 1 ♀ Rio. 1 ♂ Santa Catharina.

(c). Upf hyaline spot in space 5 conspicuous and usually there is a second upper spot in the space. Above yellower and uph centrally paler, almost hyaline. Unh the discal band broadly enters space 7.

Sub-sp. **edix** nov: ♂ Sapucay, Paraguay: type B.M.

B.M. 1 ♂ São Paulo. 9 ♂ 2 ♀ Paraguay.

7 (6). Uph with a hyaline cell spot (sometimes obscured) and veins black. Above bright tawny. Unh as in *epimachia* and genitalia very similar: upper, dorsal, angle of valva angled instead of rounded. ♂ F 25 mm.

draudti Riley 1926: ♂ Chairo, Bolivia: type B.M. Fig Seitz as *epimachia* upperside: genitalia fig Bell 1934.

B.M. 24 ♂ Peru (Chanchamayo, El Porvenir, Huancabamba, Cuzco, San Ramon, La Merced, Rio Inambari, Marcapata). 8 ♂ Bolivia (Frainas, Chairo).

8a (4b). Upf discal spots in spaces 3 and 4 much smaller than the cell spot. Unh markings like *epimachia*. Sexes alike.

8 (9a). Above tawny, more or less brown shaded, borders not contrasting strongly with the ground colour. Unh pale yellow to white: discal band separate or conjoined to the dark border. Upf generally with hyaline dots in spaces 3, 4 and two in 5. ♂ F 24 mm.

santhilarius Latreille 1824: ♀ Brazil: type B.M. Fig Hewitson 1873: genitalia fig Bell 1934. Fig in Seitz is *epimachia*.

B.M. 16 ♂ 18 ♀ Brazil (Rio, Santa Catharina, Espirito Santo, Organ Mts, Santos).

9a (8). Above broad border H and outer $\frac{3}{4}$ F black with a more or less conspicuous indigo sheen, contrasting strongly with the red or ochreous ground colour.

9 (10). Uph the inner dark cell spot conjoined to the spot above it in space 7. Upf the 7 spots in spaces 3 to 8 form an "S", beyond which there is a more or less well-developed macular band of blue scaling from apex to dorsum, which band appears also on unf. Aedeagus serrate on right side, as in *santhilarius*, to which species it is closely allied.

assaricus. 2 sub-species.

(a). Above ground colour dusky yellow. Unh pale areas greenish white.

Sub-sp. **assaricus** Cramer 1779: Surinam: figured. Fig in Seitz is *mapirica*.

B.M. 1 ♂ 1 ♀ Fr Guiana. 4 ♀ Brazil (Capim, Itaituba to Obidos).

(b). Above ground colour red. Unh pale bluish white.

Sub-sp. **mapirica** Strand 1920: ♂ Mapiri, Bolivia. Fig Seitz as *assaricus*. Genitalia fig Bell 1934.

B.M. 2 ♂ 1 ♀ Peru (Tarapote, La Merced, Rio Colorado). 7 ♂ Bolivia (Buenavista, Mapiri, San Ernesto, Rio Songo).

A.17. GRANILA

10 (9). Upf the inner dark cell spot separated from the dark spot above it. Aedeagus bifid.

pardalina. 2 sub-species.

(a). Above orange yellow. Upf with a conspicuous dull yellow macular submarginal band from space 1b to the costa, midway between the hyaline spots and the termen: the discal hyaline spots in spaces 3 to 8 irregular as in *assaricus*. Unh ground colour yellow between the dark bands. Small, ♂ F 19 mm.

Sub-sp. **guarea** nov: ♂ Belem, Pará: type B.M.

B.M. 1 ♂ 1 ♀ Belem, Pará, bred by A. Miles Moss, on Guarea.

(b). Very like *mapirica*, ground colour above red and unh bluish white. Upf the hyaline spots in spaces 3 to 8 in a comparatively straight row: the 2 spots in space 5 conjoined in ♂, but in the ♀ the spots in spaces 3 to 5 are much reduced or absent: submarginal blue scaling absent, but sometimes present unf from apex to vein 3. Unh the dark discal band may be more or less conjoined to the dark border. ♂ F 23 mm.

Sub-sp. **pardalina** Felder 1867: ♀ Colombia: type B.M.: figured. Fig Seitz: genitalia fig Bell 1934.

Synonym. *aurora* Röber: 1925: ♀ Ecuador.

B.M. 1 ♀ Ecuador. 8 ♂ 3 ♀ Peru (Tarapote, Chanchamayo, La Merced). 2 ♂ Bolivia (Buenavista). 1 ♂ Teffe, Amazons. 1 ♀ Colombia.

A.17. GRANILA Mabille 1903: type *paseas* Hewitson: sole species included.

A single species superficially like *Jemadia*, but upf the central band is hyaline and, in the ♂, the ends of the patagia are orange over the costal bases of the forewings. ♂ F 24 mm.

paseas. 2 sub-species.

(a). Hyaline markings white.

Sub-sp. **albimacula** Mabille & Boullet 1908: ♀ Brazil: figured. ♀ fig Seitz as ♀ *paseas*.

Synonym. *pullata* Zikan 1938: ♀ Itatiaya.

B.M. 5 ♂ 7 ♀ Brazil (Esperito Santo, Rio Grande).

(b). Hyaline markings yellow.

Sub-sp. **paseas** Hewitson 1857: ♀ Brazil: type B.M.: figured. ♀ fig Seitz as *paseas* ♂; his *paseas* ♀ is *albimacula*. Genitalia fig Bell 1933. B.M. 1 ♀ Parana. 1 ♂ São Paulo. 1 ♀ "Brazil" (type). 7 ♂ 3 ♀ Paraguay.

A.18. PASSOVA Evans (p. 6): type *passova* Hewitson: fixed by author.

Three apparently dissimilar groups of species, which agree closely in respect of structure and genitalia. All males have dense brushes on the inside of the femora and tibiae of the hind legs.

Ia (8). Uph without a tornal red lobe.

1b (6a). Cilia white. Above black with more or less developed iridescent bright blue on upf over the basal third and about end cell, conjoined by a streak along the costa: on uph as a submarginal band, 2 mm. wide, divided by dark veins. Below black: unh more or less shining indigo blue.

Gazera Group. 5 species.

1c (3a). Pre-anal segment of abdomen red, in addition to the anal segment: ♀ only the anal segment red. ♂ H termin straight or slightly irregular: tornus produced.

1 (2). Head, palpi, cheeks and collar black. Outer edge of patagia and fore coxae red. End of cuiller broad, serrate and inwardly pointed. ♂ F 25 mm.

nigrocephala Bell 1934: ♂ Colombia: genitalia figured.
B.M. 1 ♂ Colombia (Bogota).

2 (1). Head red. End of cuiller sloped forward and serrate; the serrated face straight or slightly concave.

ganymedes. 3 sub-species.

(a). Unh with a broad white basal band, reaching end of cell and outwardly convex, as in *Pyrrhopyge phidias bixae*. Palpi and cheeks red: collar, patagia and fore coxae black. H termin not white before the cilia. ♂ F 24 mm.

A.18. PASSOVA

Sub-sp. **ganymedes** Bell 1931: ♂ Colombia: genitalia figured.

B.M. 1 ♂ no loc.

(b). Unh plain. Collar and patagia red. Palpi, cheeks and fore coxae black. H termen not white before the cilia. H termen evenly rounded. ♀ F 30 mm.

Sub-sp. **gulia** nov: ♀ Ecuador, Loja: type B.M.

B.M. Only the type.

(c). As *gulia*, but palpi red: patagia black, but with more or less of an admixture of red hairs. Uph, and more extensively unh the termen is narrowly white before the cilia. ♂ F 26 mm.

Sub-sp. **gelina** nov: ♂ Chanchamayo, Peru: type B.M.

B.M. 15 ♂ Peru (Chanchamayo, Pozuzo, Perene, Huanuco).

3a (1c). Pre-anal segment of abdomen black. Head, collar, palpi, cheeks red: patagia black.

3b (5). Fore coxae red. H termen not white before cilia.

3 (4). ♂ H termen straight, slightly produced at end of vein 2 and tornus produced: ♀ termen convex. Cuiller constricted before tip, which is rounded, serrate and inwardly pointed. The 2 females in the B.M. correspond with the original description of *gellias*. The only ♂, labelled Theresopolis, is plainer, devoid of the blue scaling, and the red colouring is more crimson. ♂ F 25 mm.: ♀ 32 mm.

gellias Godman & Salvin 1893: ♂ Costa Rica. Fig G & S 1906: Seitz.

B.M. 1 ♀ Panama (Chiriqui.) 1 ♀ "Peru". 1 ♂ "Theresopolis".

4 (3). ♂ H termen very irregular, more produced at end of vein 2 and less produced at tornus. Cilia narrowly white on H in ♂, sullied in ♀: on F dark from vein 3 to apex. Iridescent blue areas more conspicuous than in other species. Cuiller bifid, the lower arm projecting over the valva. ♂ F 20 mm.; ♀ 27 mm.

glacia nov: ♂ Fr Guiana: type B.M.

B.M. 1 ♂ Fr Guiana. 1 ♀ Surinam.

5 (3b). Fore coxae black. H termen narrowly white before the cilia. H termen as in *gellias*, tornus less produced: ♀ termen excavate before vein 1b, forming a well-defined tornal lobe. Cilia white, darkened at apex F. Cuiller short, curved forward, blunt, serrate. ♂ F 22 mm.: ♀ 25 mm.

gazera Hewitson 1866: ♂ Amazons: type B.M. Fig Hew 1871: Seitz.
B.M. 2 ♂ 1 ♀ Amazons (Manaos, St Paulo).

6a (1b). Cilia orange, broad on H and preceded by a narrow orange band. Pre-anal segment red. Wings shining black, veins conspicuous. H produced, termen straight.

Greta Group. 2 species.

6 (7). Cuiller narrow, undivided. Large, ♂ F 27 mm. Collar and outer ends of patagia, over wing bases, red: fore coxae black, but sometimes with a few red hairs: head and palpi black.

greta nov: ♂ Huancabamba, Peru: type B.M. Genitalia fig and insect described by Bell 1931 as *fleximargo* Mabille & Boullet, but *greta* has a black head and a red collar, while *fleximargo* was stated to have a red head and a black occiput or collar.

B.M. 5 ♂ Huancabamba. 1 ♂ La Merced, Peru. 1 ♂ Bolivia (Yungas—La Paz).

7 (6). Cuiller divided into 2 slender arms, the upper arm pointed and serrate at back: the lower with a blunt serrate tip. Smaller, ♂ F 23 mm. Patagia black.

vilna. 2 sub-species.

(a). Head, collar and palpi red.

Sub-sp. **vilna** nov: ♂ Bueyes, Bolivia: type B.M.

B.M. Only the type.

(b). Head, collar and palpi black. Pre-anal segment with only a few red hairs.

Sub-sp. **vanta** nov: ♂ Bolivia: type B.M.

B.M. Only the type.

8 (1a). Uph with a conspicuous red tornal lobe. Above black with an indigo-blue sheen. Head and palpi red. The genitalia indicate that there is only a single species superficially resembling *Aspitha agenoria* and varying after the manner of *Pyrrhopygæ phidias*. ♂ F 23 mm.

Passova Group. Single species.

passova. 6 sub-species.

(a). Uph outwardly pale blue and unh with a broad bluish white basal area (*hyperici* form). The type, from Ega, has the blue area uph confined to the apical quarter of the wing. The Rev. A. Miles Moss collection contains a series of 31 ♂ and 32 ♀ bred at Belem, Pará: in all of these the blue area uph extends generally to the red tornal lobe, but in a few specimens it is narrow and in 2 specimens it is absent, as in *passova*. In half the series the white area unh covers two-thirds to three-quarters of the wing: in the other half it covers half the wing, as in the type.

Sub-sp. **gortyna** Hewitson 1866: ♂ Ega: type B.M. Fig Hewitson 1871: Seitz.

B.M. 1 ♂ Ega, Amazonas. 31 ♂ 32 ♀ Pará.

(b). Uph no pale blue area: unh with a white basal area covering half the wing (*bixae* form). In French Guiana the tornal red lobe uph is very small and outwardly black edged.

Sub-sp. **passova** Hewitson 1866: ♀ Cayenne: type B.M. Fig Seitz. Genitalia fig Bell 1921.

B.M. 4 ♂ 4 ♀ Fr Guiana.

(c). Similar to *passova*, but uph the red tornal lobe is very much larger and not black edged outwardly. Unh white area narrower, covering one-third of the wing.

Sub-sp. **rudex** nov: ♂ Chanchamayo, Peru: type B.M.

B.M. 15 ♂ Peru (Chanchamayo, Perene, Rio Colorado, Amazonas, Cavallo Cocho). 5 ♂ Amazonas (Cameta, Manaos, Ega).

(d). Unh without any basal white area (*phidias* form). Uph tornal red area as in *rudex*.

Sub-sp. **styx** Möscher 1878: ♂ Colombia. Fig Seitz. Genitalia fig Bell 1931.

Synonym. *anina* Plötz (MS) 1879.

B.M. 1 ♂ Colombia. 2 ♂ Venezuela. 4 ♂ 2 ♀ Bolivia (Santa Cruz de la Sierra, Santiago del Estero, Buena-vista).

(e). As *styx*, but upf the tornal red lobe extends to vein 2, whereas in other forms it does not extend beyond the middle of space 1c. Also the collar is entirely red instead of brown with a few red hairs.

Sub-sp. **practa** nov: ♂ Parana: type B.M.

B.M. 1 ♂ "Santarem". 1 ♀ Goyaz. 1 ♂ São Paulo. 1 ♂ Parana. 2 ♀ Paraguay.

(f). The form from British Guiana is intermediate between *styx* and *passova*. In 2 ♂ and 1 ♀ (including the type) there are macular traces of the white basal area unh: 1 ♂ 1 ♀ no trace: 2 ♀ as *rudex*: 1 ♀ as *passova*. Upf tornal lobe as in *rudex*.

Sub-sp. **stacer** nov: ♂ British Guiana: type B.M.

B.M. 2 ♂ 4 ♀ British Guiana. 1 ♂ 1 ♀ Surinam.

A.19. ASPITHA Evans (p. 6): type *aspitha* Hewitson: fixed by author.

In all species the termen H is more or less irregular and is produced at ends of veins 1b and 2, forming a well-defined tornal lobe. Head black, more or less conspicuously white spotted. Anal segment black. Genitalia of all species very alike.

Ia (5). Palpi and fore coxae white. Upf with a central white hyaline band of 3 spots tapering to vein 1.

1b (3a). Upf no red area at or about tornus. Cilia F black: of H white. H termen very irregular.

1 (2). ♀ above, no ochreous basal areas. Patagia only red. Above shining indigo blue, central band upf broad, 4 mm., no apical spots. Unf white costal streaks over band narrower than the band. Abdomen black, not white striped: at extreme end, white. ♀ F 27 mm.

teffa nov: ♀ Teffe (Ega), Amazons: type B.M.

B.M. 2 ♀ type loc.

A.19. ASPITHA

2 (1). ♂ ♀ above, with patagia, tegulae, sub-basal band upf and basal area upf tawny or red. Unf white costal streak longer than band. Abdomen white ringed.

aspitha. 3 sub-species.

(a). ♀ upf with 3 apical spots. Striping above tawny: absent below. ♀ F 24 mm. Plötz's type is said to have 4 apical spots upf and a discal streak in spaces 3 and 4. Bell 1931 described a ♂ agreeing with Plötz's description on the upperside, but with the tawny areas repeated on the underside.

Sub-sp. **parima** Plötz 1886: Surinam. Fig by M & B 1908 and Seitz is *leander*: fig Bell 1931 of genitalia.

B.M. 1 ♀ Fr Guiana.

(b). Uph without apical spots in ♂: ♀ with a spot in space 8 and a dot in space 7. Above basal colouring tawny and on H much more extensive: unh with a faint dash of tawny scaling mid cell. ♂ F 23 mm.; ♀ 26 mm.

Sub-sp. **aspitha** Hewitson 1866: ♂ St Paulo, Amazons: type B.M. ♀ Fig Hew 1869: fig in Seitz is *Pyrrhopyge spatiosa mabillei*.

B.M. 1 ♀ Para (specimen fig by Hewitson). ♂ 1 St Paulo (type). 1 ♂ Tonantins, Amazon.

(c). Exactly like *aspitha*, but the basal colouring is red instead of tawny and the cilia at tornus in space 1b are red mixed with black hairs.

Sub-sp. **rufescens** Riley 1919: ♂ Rio Madeira: type B.M.

B.M. Only the type.

3a (1b). Uph with a tornal red area.

3 (4). Uph red tornal area consists of a spot before termen in space 1c. Above, black with a red sub-basal band F and H. Upf with a narrow central hyaline band, 1.5 mm. wide and 6 apical spots in line from space 3 to space 8. Below, as above, but the sub-basal band unf is whitish. Cilia narrow, black: on H only white in space 1c and a few white scales mid termen. Tegulae orange, continued on to patagia as a red spot. ♂ F 22 mm.

leander Boullet 1912: Muzo, Colombia. Fig M & B 1908 and Seitz as *parima*.

B.M. 5 ♂ Colombia (Bogota, Cundinamarca, Cananche).

4 (3). Upf tornus (and cilia) red from vein 1a to just beyond vein 1b as in *agenoria*. Above, indigo blue with red sub-basal bands F and H: upf with a central hyaline band as in *aspitha*, no apical spots. Below, sub-basal red bands absent, but with a narrow streak of red hairs along thorax against base of F. Cilia white except at apex F. Patagia entirely red, also the tegulae. ♂ F 24 mm.

bassleri Bell 1940: ♂ Peru, Rio Huallaga.

B.M. 1 ♂ Peru (Pozuzo).

5 (1a). Palpi and fore coxae black. Abdomen entirely black, with a few white hairs at extreme end. Cilia white, usually dark at apex F. Upf conspicuous red tornal lobe. Patagia red and sometimes adjoining end of tegulae. Aedeagus finely serrate at side. ♂ F 22 mm.

agenoria. 3 sub-species.

(a). Above, unmarked.

Sub-sp. **agenoria** Hewitson 1876: ♂ Peru, Chanchamayo.

Fig Seitz: genitalia fig Bell 1931.

B.M. 1 ♂ Colombia (S. Martin, Llanos of Rio Meta).

39 ♂ Peru (Chanchamayo, La Merced, Rio Colorado, Tarapote). 9 ♂ Bolivia (S. Ernesto, Cochabamba, Sara, Santa Cruz, Coroico, Yungas—La Paz, Tarnas).

(b). Exactly as *agenoria*, but upf with a central hyaline white band as in *aspitha*.

Sub-sp. **saries** Druce 1908: ♂ Farinas, Bolivia: type B.M.: figured. Fig Seitz.

B.M. 1 ♂ Perene, Peru. 1 ♂ Chanchamayo. 3 ♂ Bolivia (Farinas, Muschay, Beni R.).

(c). Upf and unf the band placed as in *saries*, but obscured, seen from above it is black and in a side light greenish white. The scales on the band run at right-angles to the costa and it looks just as if a coat of varnish had been applied to the band on a specimen of *saries* with strokes of a rather coarse brush directed away from the costa towards the dorsum.

Sub-sp. **cruor** Druce 1908: ♂ Huanuco, Pozuzo, Peru: type B.M.: figured. Fig Seitz.

B.M. 5 ♂ type loc.

A.20. OXYNETRA

A.20. OXYNETRA Felder 1867: type *semihyalina* Felder: sole species included.

Synonym. *Dis* Mabille 1889: type *annulatus* Mabille: sole species included.

Though there is considerable variation in the venation of the species, the similarity of the genitalia and the formation of the end of the cell F indicate a close alliance.

1 (2a). Head red, as well as the collar, ends of patagia over costa bases F and the palpi: cheeks black with a few red hairs: fore coxae black. Abdomen above, broadly red ringed on each of the last 6 segments and anus entirely red. F vein 11 absent and vein 4 mid veins 3 and 6. H vein 3 from before end cell. Antennal club comparatively stout. F ♂ 22 mm.

roscius. 3 sub-species.

(a). Uph with central and apical pale yellow bands. Upf with a similar central band. Cilia dark, only white at end of space 1c, H.

Sub-sp. **iphimedia** Plötz 1886: Brazil.

Synonym. *erythrosoma* Mabille 1891: ♂ Brazil. Fig M & B 1908.

B.M. 4 ♂ São Paulo.

(b). Uph unmarked, upf as *iphimedia*. Cilia H white from mid space 1b to mid space 6: black on F, but sometimes whitish at tornus.

Sub-sp. **flavomaculata** Bell 1939: ♂ Santa Catharina: genitalia figured.

B.M. 4 ♂ Castro, Parana.

(c). Upf and uph unmarked. Cilia H narrowly white from end vein 1 to end vein 7: on F white nearly to apex or only about tornus.

Sub-sp. **roscius** Höpffer 1874: ♂ Brazil: MS fig of type in B.M.

Synonym. *rufocincta* Hayward 1932: ♂ Argentine: figured.

B.M. 2 ♂ Paraguay.

2a (1). Head black, white spotted: palpi and fore coxae white. Antennal club slender, sharply pointed. F vein 11 present.

2 (3a). F vein 4 mid veins 3 and 5. H vein 3 from before end of cell. Upf with a central white hyaline band, no apical spots. Uph with large hyaline central spots in cell and space 7 and two small hyaline discal spots close together in spaces 2 and 3. Abdomen red ringed as in *roscius*, but anus brown. Collar and patagia black, but some red hairs thereon over base of costa F. Cilia black. ♂ F 22 mm.

hopfferi Staudinger 1888: ♂ Chiriqui: figured as *felderi*.

Fig G & S 1893: Seitz.

Synonym. *annulatus* Mabille 1889: ♀ Chiriqui. Fig G & S 1893 from type and considered to be the ♀ of *hopfferi*. It is without markings, only the third segment of the abdomen is red and the hindwing tornus is rounded.

B.M. 1 ♂ Panama (Chiriqui).

3a (2). F vein 4 mid veins 3 and 6. H veins 3 and 4 stalked. Upf with an apical as well as a discal hyaline white band. Thorax and abdomen iridescent green: anus brown. Cilia H white before tornus, black elsewhere. ♂ F 23 mm.

3 (4). Upf apical hyaline band narrower than the distance between it and the termen, not outwardly bordered by pale scaling. Tegulae with a yellow spot over base of costa F. Above, third segment of abdomen yellow, but often not apparent. Uncus without side flanges.

semihyalina Felder 1862: ♂ (not ♀) Rio Negro: type B.M. (marked as type by Felder). Fig by Felder 1867 and in Seitz is *confusa*.

Synonym. *felderi* Höpffer 1874: ♂ Chanchamayo. Genitalia fig G & S 1893: ♂ fig Seitz.

B.M. 3 ♂ Colombia. 2 ♂ Ecuador (Rio Pastaza). 86 ♂ Peru (Chanchamayo, Huancabamba, Pozuzo, Oxapampa, La Merced, Rio Colorado, Charape, Uruhasi, Moyabamba). 8 ♂ Bolivia (Coroico, Chulumani, Songo, Cochabamba).

4 (3). Upf apical hyaline band wider than the distance between it and the termen, outwardly flanked (more conspicuous unh) by a band of pale scaling from space 2 to space 5. Tegulae unmarked. Abdomen unmarked, except

A.20. OXYNETRA

in a specimen from Ecuador, which has the third segment red edged, while in Seitz's fig of *semihyalina* (*recte confusa*) the segment is shown as entirely red. Uncus with side flanges.

confusa Staudinger 1888: ♂ "Mexico": type B.M. (original of fig by Felder 1867 of ♂ *semihyalina*). Fig Seitz as *confusa* and as *semihyalina*. Genitalia fig Bell 1934 as *semihyalina*.

B.M. 1 ♂ "Mexico" (type). 1 ♂ Ecuador. 1 ♂ Fr Guiana. 32 ♂ Peru (Hillapani, Rentema Falls, La Merced, Rio Colorado, Tarapote, Perene, Pozuzo, Yahuarmayo). 9 ♂ Bolivia (Sara, Santa Cruz, Songo, Buenavista, Santiago del Estero).

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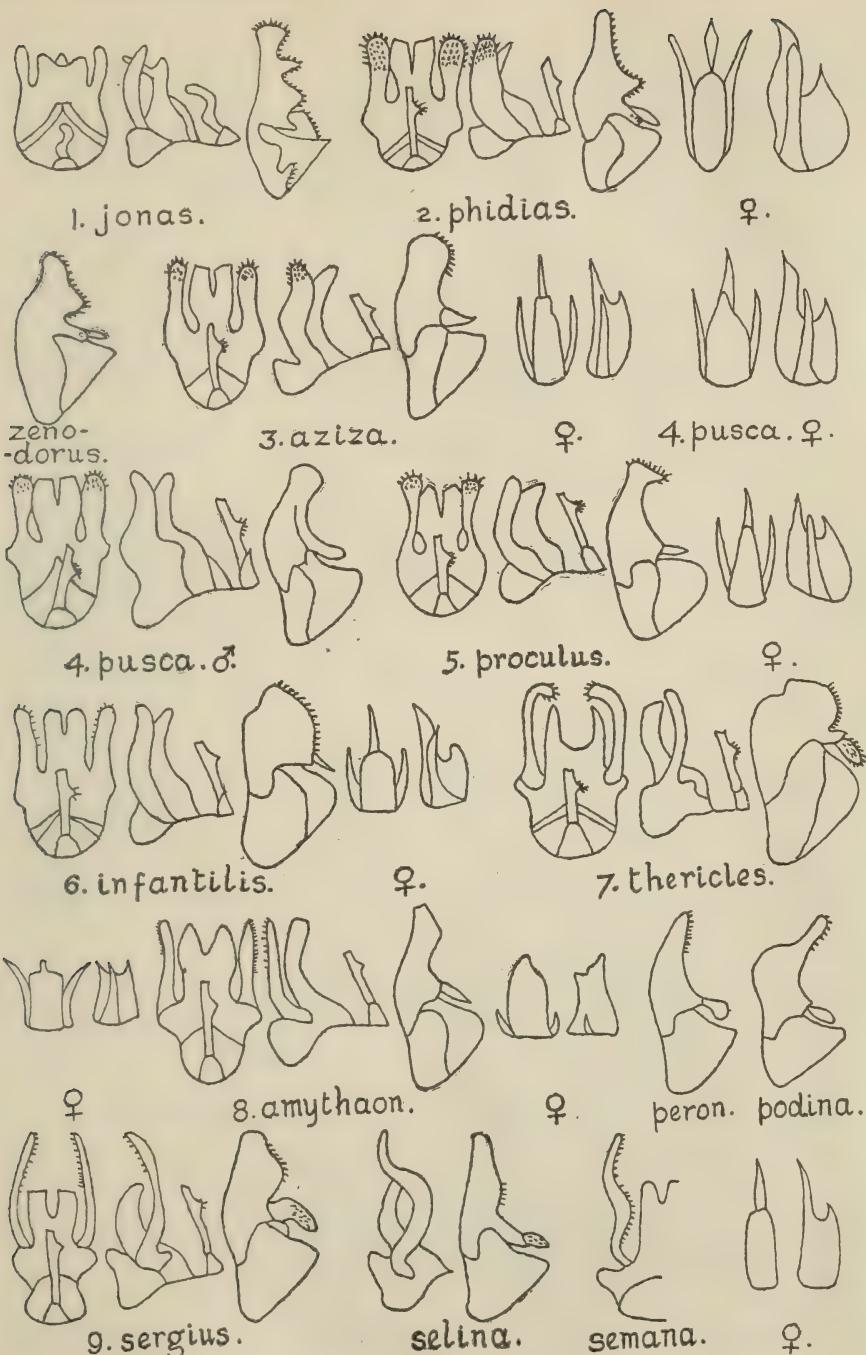
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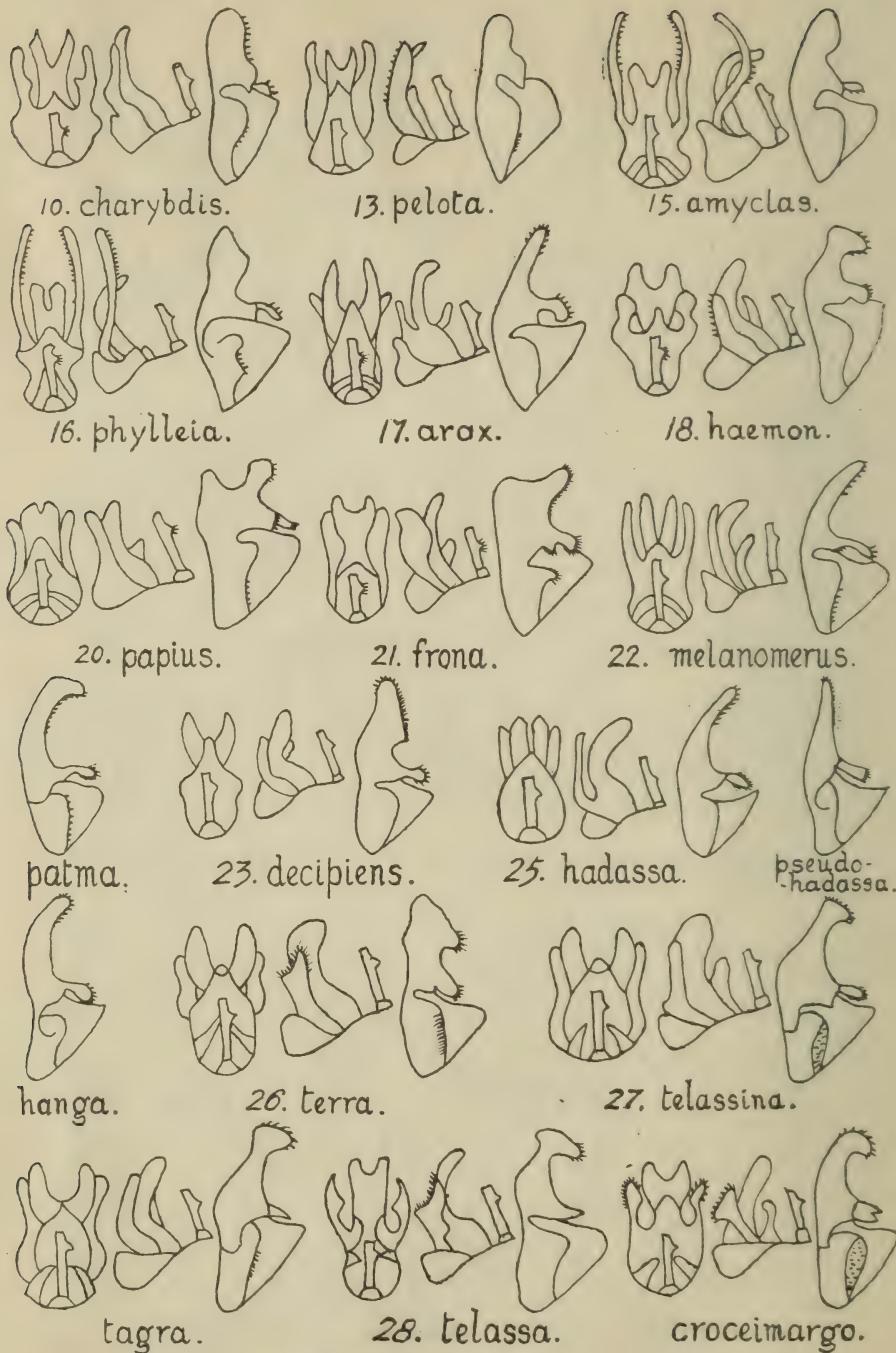
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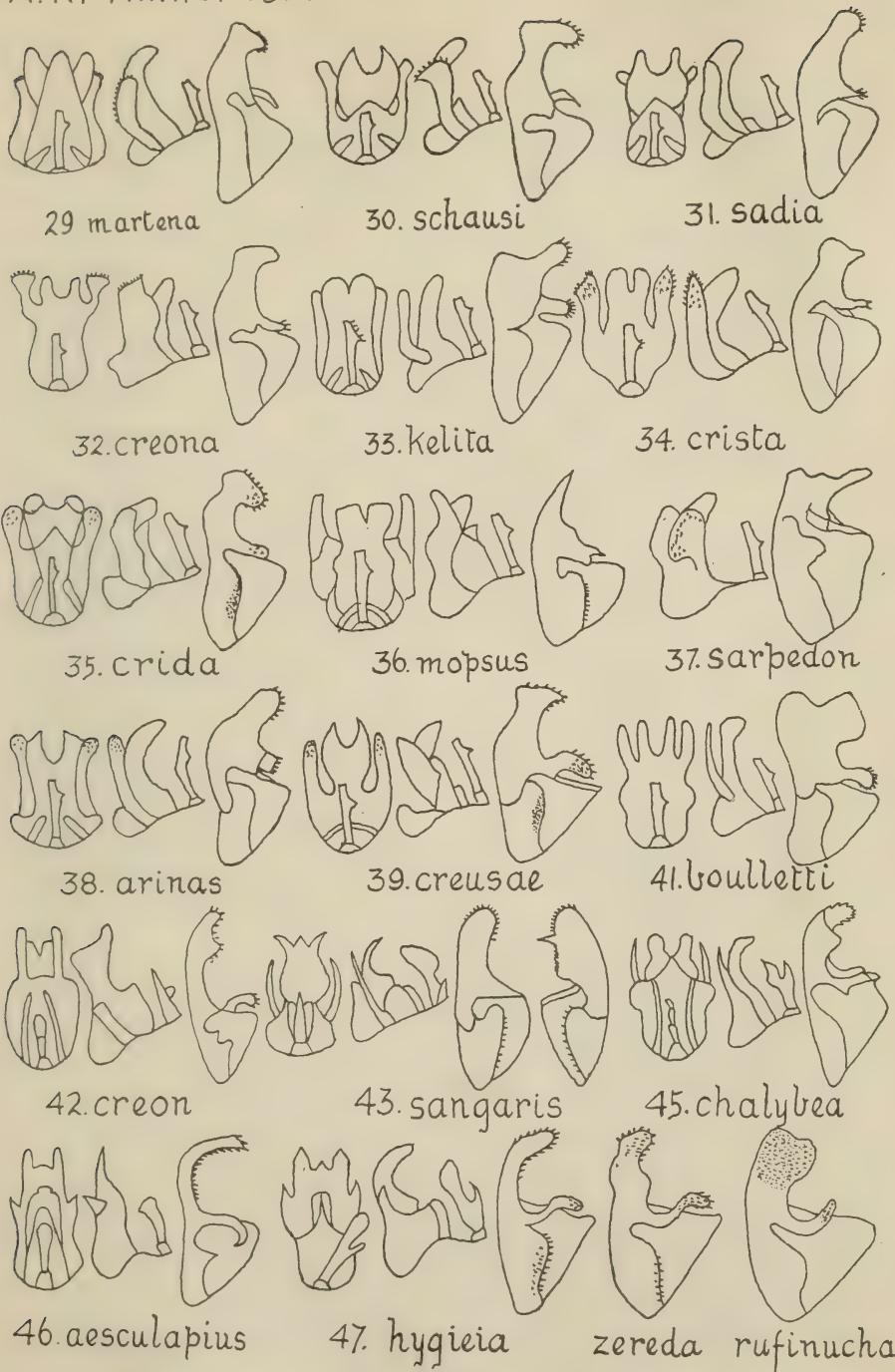
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A.I. PYRRHOPYGE.



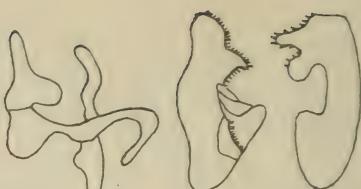
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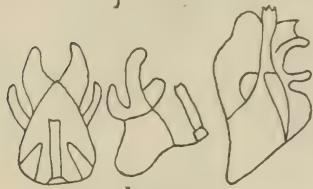
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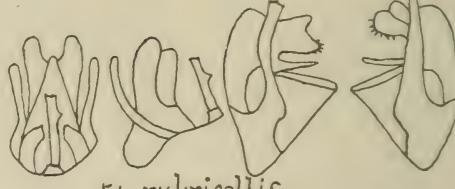
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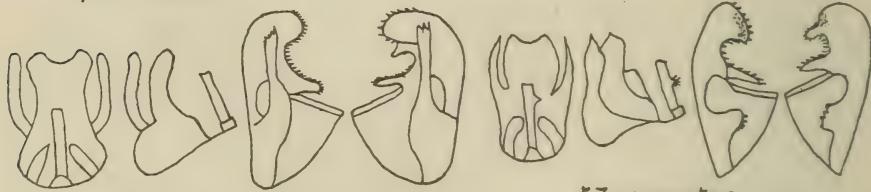
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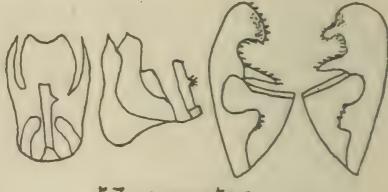
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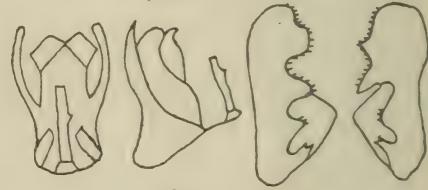
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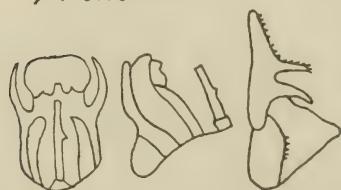
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54. thelrsa



55. cosyra



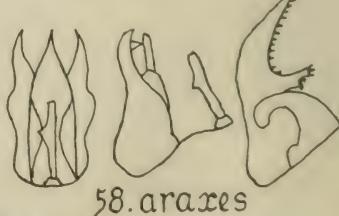
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57. maculosa

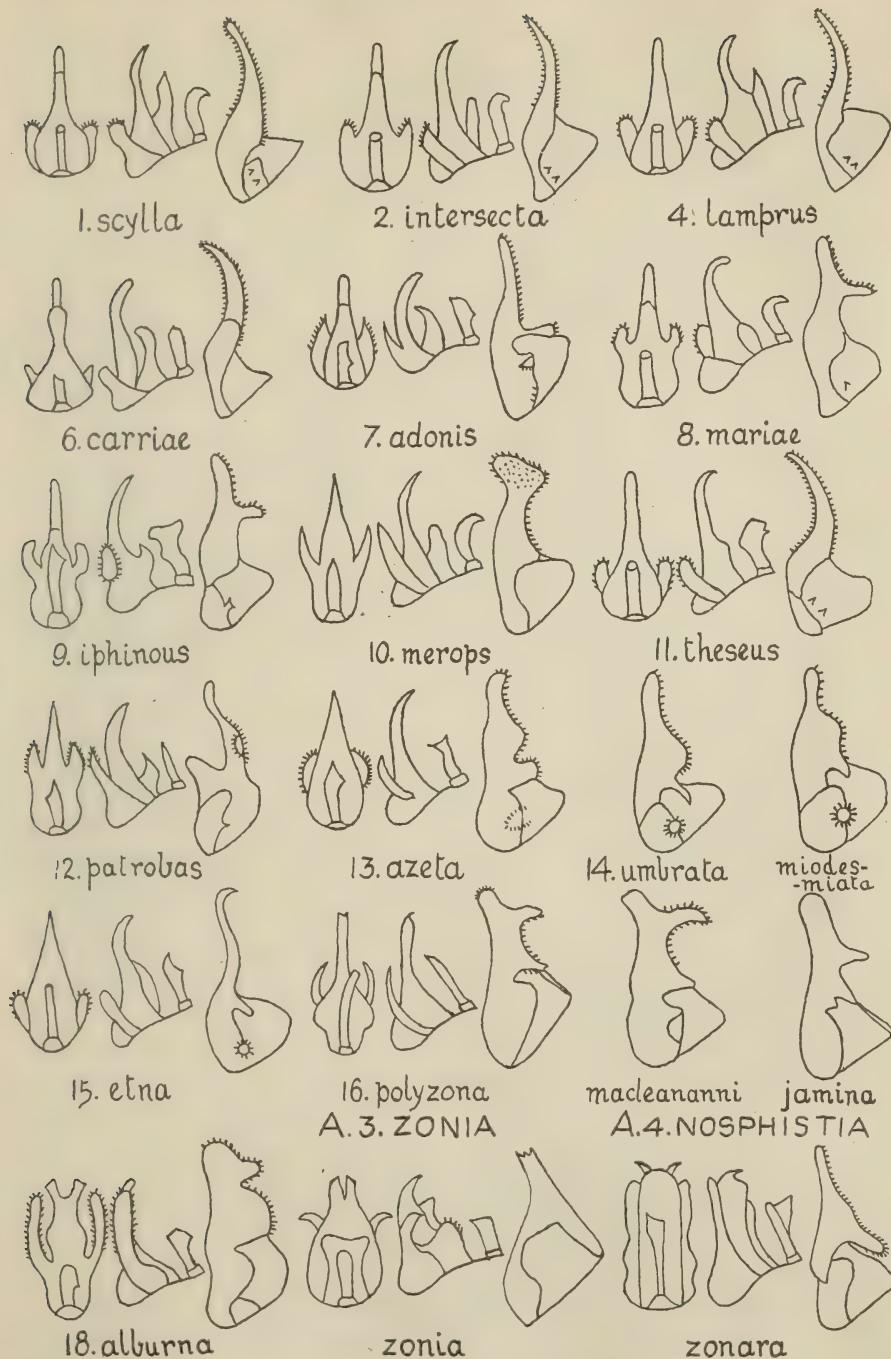


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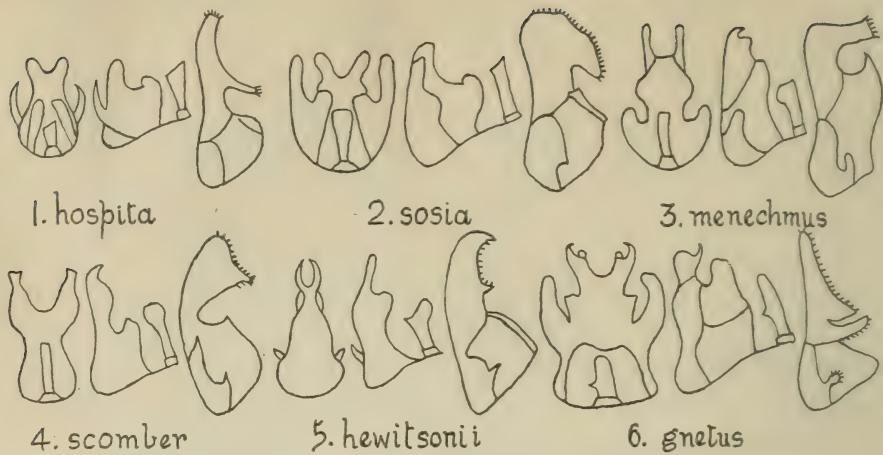


58. araxes

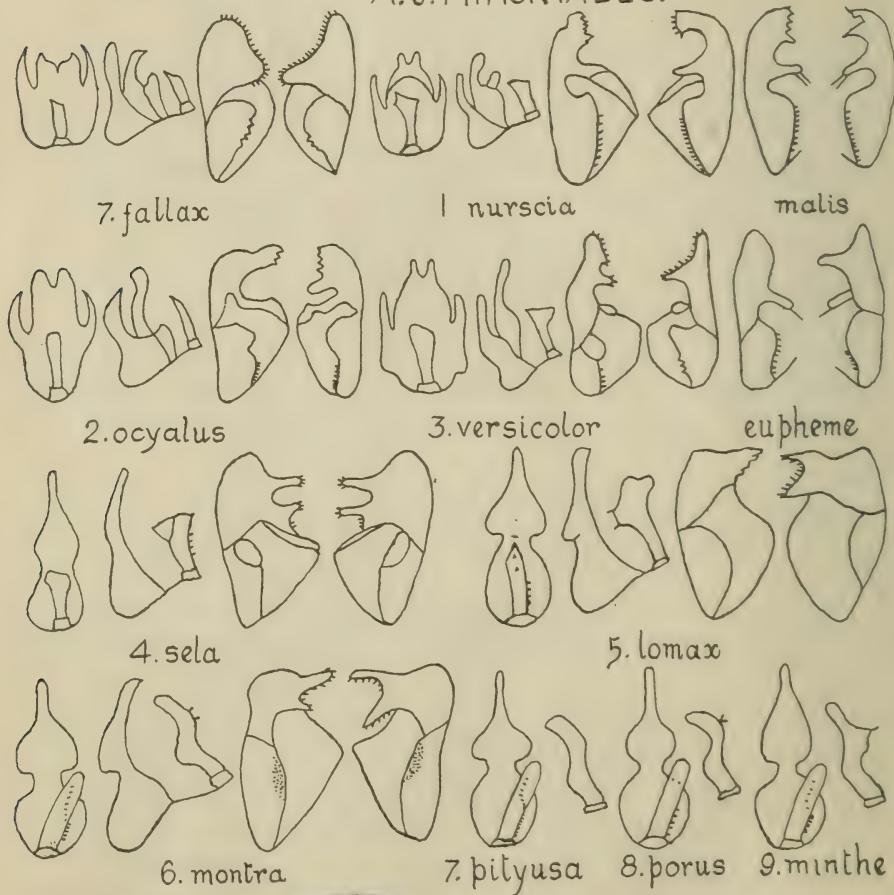
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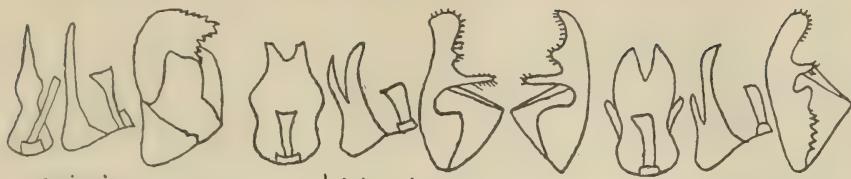
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A.6. MIMONIADES.



A.7. ARDARIS. A.8. AMENIS.



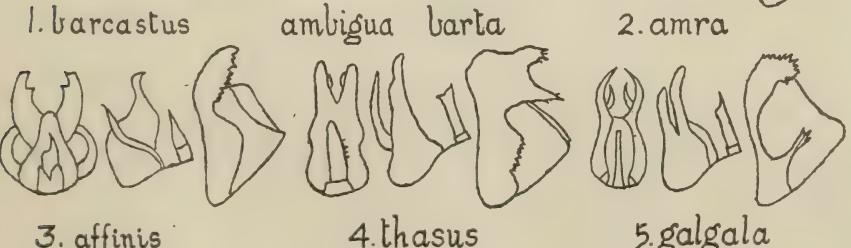
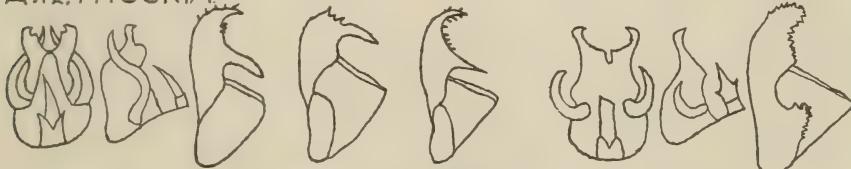
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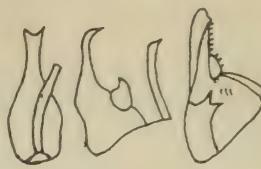
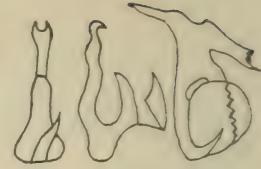
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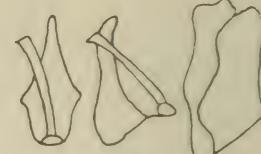
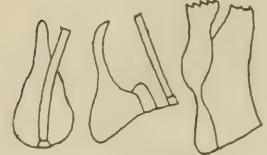
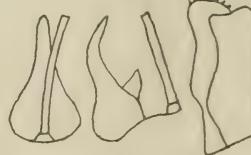
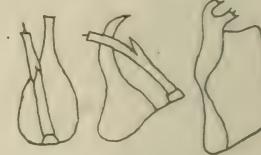
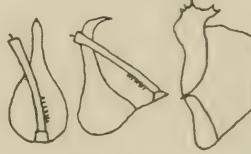
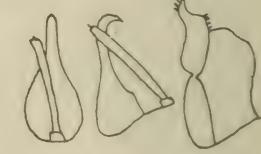
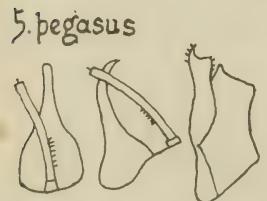
A.11. METARDARIS



A.13. MICROCERIS. A.14. CRONIADES.

*variicolor**l. pieria**2. machaon*

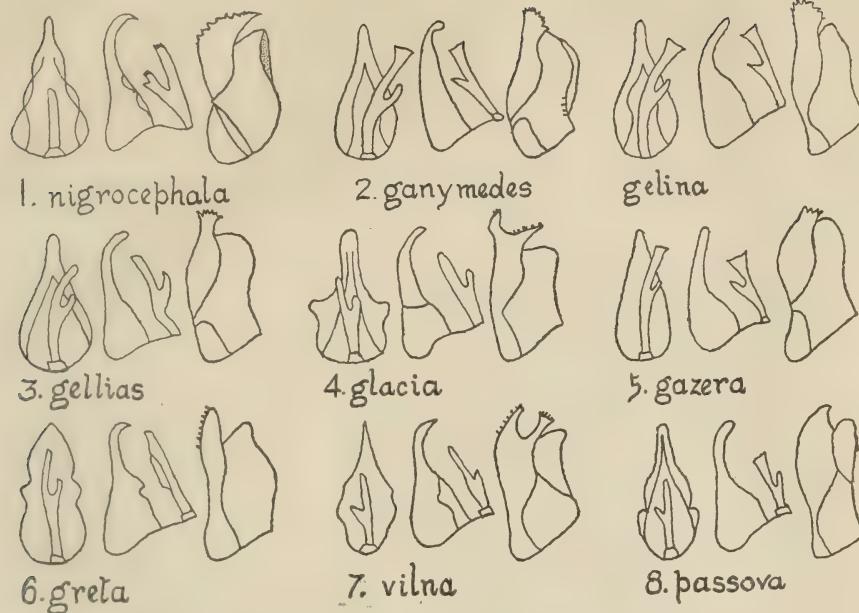
A.15. AZONAX.

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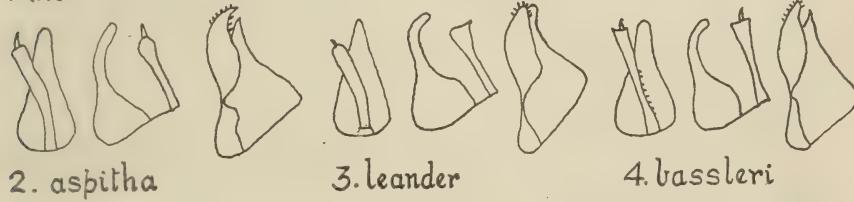
A.17. GRANILA.

*10. pardalina**basesas**albimacula*

A. 18. PASSOVA.



A.19. ASPITHA



A.20. OXYNETRA

